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AEROSOL AGE

THE MAGAZINE OF PRESSURE PACKAGING

Packaging Forum Aerosol Symposium

Cost Substantiation for Aerosols

Do It Yourself Vs. Use a Contract Filler

Give-a-Jan-Delawanna's Aerosol Laboratory

First Aerosol Coffee Product

Canadian CSM Meeting

Aerosols at Hardware Show

Plastic-Coated Glass Containers

November, 1958

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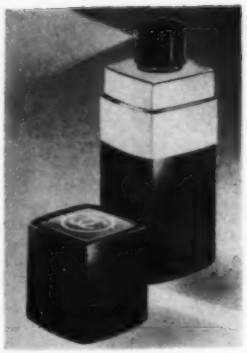

THIS MONTH'S COVER

Chanel, Inc., New York, last month introduced a new aerosol version of its world-famous "Chanel No. 5." The cap and body of the black anodized aluminum container are made by the Cosmetic Container Division of Scovill Manufacturing Co., Waterbury, Conn.; the bottles by Carr-Lowrey, Baltimore; activator cap and metered valve by VCA, Inc., Bridgeport; and the filling is being done by Pow-Pak-ConnChem, Inc., Bridgeport. Another major perfume house, Lanvin, will also market an aerosol version of its product line next month.

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AEROSOL AGE

The magazine of pressure packaging

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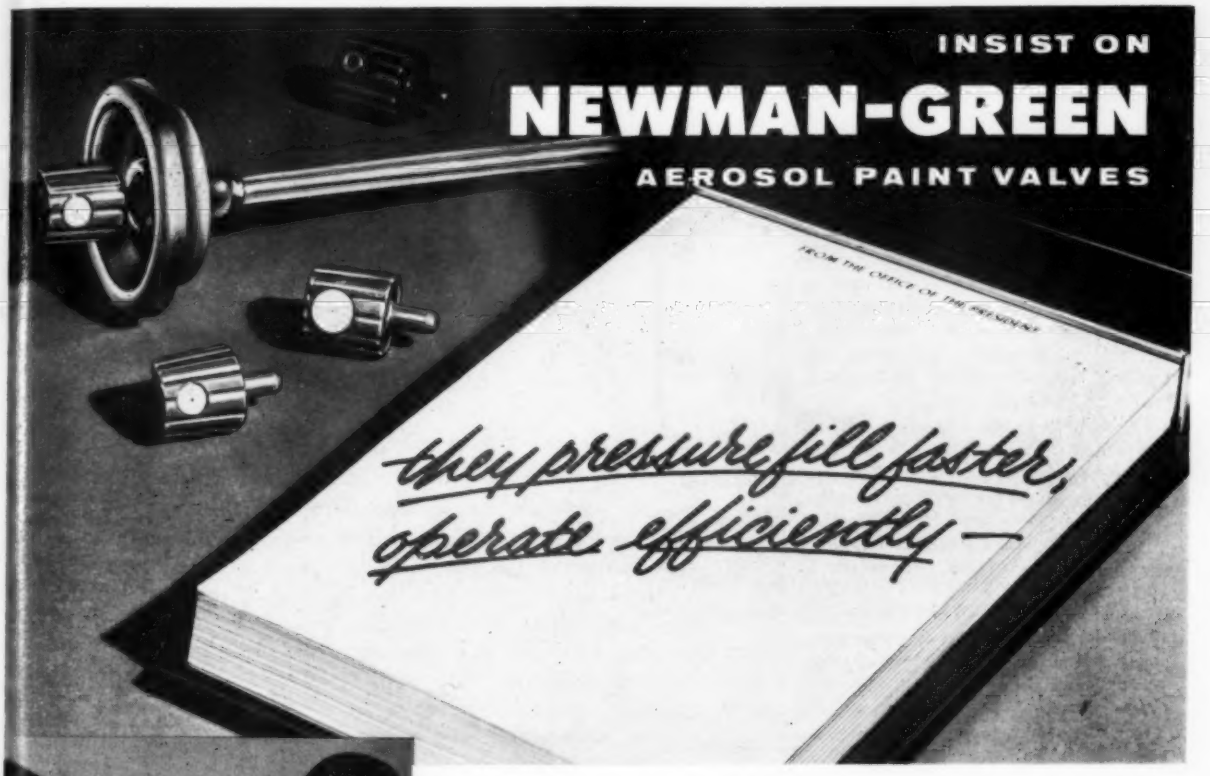

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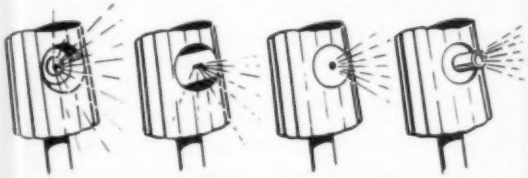

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from the

EDITOR'S MAILBAG

To the Editor:

In view of the many references to the Institute of Packaging's Pressure Packaging Discussion Group in your columns, perhaps your readers would be interested in knowing more about our activities. As the name implies, the emphasis is on "discussion," although the topic for the evening is usually introduced by a short talk of about 20-30 minutes. Our members are representative of all aspects of the industry and include both technical and commercial personnel. A wide range of experience is thus available on most topics.

I should like to take this opportunity of assuring all overseas visitors who may find themselves in London that they will be very welcome at any of our meetings. Inquiries should be made to the address below or c/o The Institute of Packaging; St. Giles' House, 50 Poland Street, London, W. 1. (Telephone REGent 7781).

Should any of your readers care to send samples or literature of their latest developments to me, c/o The Institute of Packaging, they will be made available to all of our members.

In closing, may I congratulate you on your most interesting and helpful publication.

John H. Briston
Chairman
PRESSURE PACKAGING DISCUSSION GROUP
7B Woodside Road
Sutton, Surrey, England

•

To the Editor:

T. C. Thompson, vice-president of Reddi-Wip, Inc., Los Angeles, tells us that the best magazine on food aerosols is *Aerosol Age*. Will you please be so kind as to send us a specimen copy of your magazine and a subscription rate card.

M. A. J. Verlinden
Director
HOLLAND-TRADING
The Hague, Netherlands

•

To the Editor:

We would appreciate it very much if you would submit to us any information you may have regarding the aerosol market in Israel. We are particularly interested to know if there are any aerosol products manufactured there, and if so, what kind.

Max Spangelet
ARMA PRODUCTS CO.
New York 24, N. Y.

We have informed the writer that, to our

(*Continued on Page* 60)

• **Packaging Forum Aerosol Symposium** . . . Aerosol packaging gains new adherents among top-flight pharmaceutical and packaging experts as four leading authorities speak on the subject at the 20th Annual Packaging Forum at the Edgewater Beach Hotel, Chicago. Complete papers of three of the four speakers, plus excerpts of the other pertinent talks, begin on page 14.

• **Givaudan's New Aerosol Laboratories** . . . A major supplier of aromatics and essential oils to the aerosol industry throws open the doors of its brand new aerosol laboratory to the eye of the camera. Equipment, procedures, and products-in-the-making are shown on pages 19-21.

• **Canadian Chemical Specialties Manufacturers Meet in Montreal** . . . The energetic Canadian aerosol industry, through the Aerosol Division of the CCSM, will be well represented as representatives gather from both the U. S. and Canada for the association's first annual meeting. Speakers and general program are listed on page 22.

• **First Pressurized Coffee Product** . . . Instant coffee, believed by many to be the next major breakthrough for aerosol packaging, receives a push toward pressure packaging as the first national marketer prepares to field a product. Story and details on page 23.

• **Aerosols Featured at Garden Show** . . . New aerosol products, paints, insecticides, predominate as 40,000 wholesale and retail dealers gather in New York for the National Hardware Show.

• **Plastic-Coated Glass Aerosol Containers** . . . Ever wonder how the coating is applied? What the materials are made of? Nigel Vinson, English authority, in an article on page 28 discloses some general details on manufacturing techniques, safety procedures, and other why's and wherefore's of the coating process.

Realism in Public Relations . . .

As many of our readers have undoubtedly observed, the editorial opinion of this magazine is that for some unexplainable reason the aerosol industry has been selling itself short in public relations — particularly on the company level. Far too many aerosol executives either have little real concept of the importance of public relations, or chide themselves into thinking they don't have the time or the facilities for such will-o'-the-wisp activities.

As was pointed out in a staff-written article in the April issue of *Aerosol Age*, this view is neither realistic nor very wise. The corporate image as created by an effective public relations campaign can often be invaluable in influencing present and future company sales. If done properly, it can mean the difference between a salesman getting into the office of a prospective customer, or of his being turned away with some flimsy (but irrefutable) excuse. It can also win added respect for a firm's public, creditors, competitors, etc. In fact, good public relations can act as a lever to open closed doors, a blank check for future credit, and a clean-bill toward labor peace in the company's plant.

Despite all this potential, it has been our experience that the majority of aerosol firms spend less time and money on public relations than they do on writing paper, coffee breaks for their secretaries, travel, convention expenses, and many other miscellaneous expenses that produce far less impressive long-range results! Public relations directors (or even individuals who are charged with responsibility for public relations) are too few and far between in our industry; and all too often the responsibility simply goes begging—lost in the maze of corporate titles and jobs that seem to bring in more tangible results.

By "showing the way," the publicity campaign of the CSMA's Aerosol Division, has succeeded in making many more aerosol executives *aware* of public relations as a working tool of business. However, despite this (and despite the publicity committee's highly effective efforts toward educating the consumer), the fact remains that too few of the actual contributors to the CSMA campaign *themselves* have an effective public relations program in their own companies.

Far be it for us to suggest that the already harassed aerosol executive himself take on the added burden of another title and another job. It would be enough to designate some intelligent young man in the company as "public relations director", or to employ the services of a qualified public relations counselor. To simplify the search, a company's advertising agency may offer public relations services as well as its advertising activities.

As was indicated in our previous article, the amateur's approach to public relations is far more effective in this field than in most others. In fact, any individual of fair intelligence can, with the aid of a proper reference book on the subject, do a highly creditable job on public relations—with only a minimum of time and effort. Working with the top executive and technical personnel within his own company (the same individuals with whom he has been having lunch and going to conventions for years) he can stimulate a steady flow of news releases, feature stories, new product releases, and technical articles to the trade and general press.

The result can be well worth the comparatively small expenditure of time and effort.

Retail and laboratory pharmaceutical applications, which were shown in front of the speakers' platform, drew a large and interested section of the audience.

Aerosol Pharmaceutical Symposium Held At Packaging Institute Forum

THE development of aerosols could well be one of the most revolutionary developments in the entire history of the pharmaceutical industry, Edwin Pomerantz, of the Pharmaceutical Section of Chas. Pfizer & Co., Brooklyn, declared at the drug and pharmaceutical seminar of the Packaging Institute's 20th annual National Packaging Forum on Oct. 14. Mr. Pomerantz was the first of four aerosol authorities who addressed the seminar, which was held at the Edgewater Beach Hotel in Chicago.

"The pharmaceutical industry is becoming more and more competitive," Mr. Pomerantz declared, "and the more advantages the marketer is able to incorporate into his package, the more successful his sales."

Mr. Pomerantz suggested that the conventional halogenated hydrocarbon propellants will have to yield to compressed gas non-toxic propellants for orally-administered vitamins and other pharmaceuticals, but declared that the fluorocarbons have a definite place in the formulation of nasal and throat sprays, and for inhalation therapy units.

For antibiotic mixtures and other similar specialized applications, he declared that the aerosol method of application is often the best possible means of dispensing the medication. He described his company's work with an aerosol combining neomycin, polymixin, and hydrocortisone; and another combining neomycin, hydrocortisone, and PVP/VA copolymers for veterinary medicine and post operative surgical applications on humans.

Mr. Pomerantz cautioned the prospective pharmaceutical packager to be on his guard against harmful chemical reactions of his product with the metal in the containers or valve parts. Valves, he declared should have epon-coated metal parts, and cans should have a vinyl, vinyl phenolic, epon, or lacquer coating.

As for the future of aerosol pharmaceuticals, he suggested that the solution of following basic problems would considerably hasten the advent of the true age of pharmaceutical aerosols:

1. Development of a "universal"

(*Continued on Page* 58)

M. J. Harrington, Dewey & Almy; Charles Rafferty, Bristol Flowed Gasket Co.; Brad Smith, Nestle Co.; and Sig Was, S. J. Was. R. J. Hennessy, Lederle Laboratories; and Robert A. Foresman, Jr., Aerosol Consultant. John Buchanan, Continental Can; John Haslip, Pennsalt; E. E. Husted, Union Carbide; and Morris Root, G. Barr & Co.

Cost Substantiation of Aerosol Packaging*

By Samuel Prussin
Director of New Products
Aerosol Techniques, Inc.,
Bridgeport, Conn.

BECAUSE of the vast scope and intensive activity in the aerosol field distributed among the pharmaceutical, proprietary medicinal, cosmetic, specialty and food areas, the scope of this paper will necessarily be confined to a narrow segment of this vastly expanding business. The discussion will be limited to the cost substantiation of aerosol packaging within the pharmaceutical and proprietary medicinal fields in order that more than a superficial understanding will be conveyed as to the merits of aerosol versus nonaerosol packaging. Briefly, the factors which compensate for the increased cost in an aerosol package, and which influence the packaging of the product as an aerosol follow:

1. The obtaining of a dispensing form not readily obtainable or available in other packaging media. These include foams and air-borne sprays.
2. Application is fast, convenient and uniform.
3. Accurate metering can be obtained from 35 microliters to 1-teaspoon and better.
4. Particle size control from a gross, wet pattern to an air-borne spray is possible by balancing the type and amount of propellant against the valve system.
5. The product is "factory fresh" from point of manufacture to terminal use at the consumer level.
6. Since the aerosol packages are hermetically sealed and the contents not exposed to atmospheric conditions, increased stability is achieved.
7. The obtaining of special therapeutic effects.
8. The obtaining of cosmetic elegance on topical application.
9. The elimination of direct contact with the injured area often reducing pain.
10. The prevention of contamination of the bulk.
11. There is no waste or intermediate applicator necessary.
12. The novelty of the aerosol concept.

The various medicinal and pharmaceutical aerosol products can be broken down into the following categories:

1. topical preparations
2. inhalation therapy aerosols
3. aerosol units for treatment via the oral route
4. dental products
5. miscellaneous

Topical Preparations

Some of the more popular drug and pharmaceutical products which appear in aerosol packages for topical use as well as other products which appear to be applicable in aerosol form for dermatological conditions are:

burn remedies
athlete's foot medications
poion ivy lotions
spray banadages
skin balms
topical anesthetics
foot balms
adhesive tape removers
foot powders
topical steroid products
antihistamine preparations
calamine, zinc oxide preparations
sulfur, resorcinol preparations
tar product
scabicides
fungicides
protectives
cleansers
emollients
lubricants

In many cases, such as products designed for application to painful areas, the aerosol has additional patient advantages. No matter how careful the user is, many antiseptics, burn remedies, and similar types of conventional jar, tube or glass bottle products are painful to apply with a swab or other device. The aerosol package, with its ability to deposit the medicament in a soft spray without the use of applicators which must touch the affected area, represents the least painful treatment now available.

In the case of anti-pruritic remedies, for use in treatment of skin rashes, poison ivy, sunburn, and similar surface problems, the aerosol provides an almost invisible, but still medically effective film, that is cosmetically acceptable. Moreover, the

*Reprinted from complete paper presented at the 20th Annual National Packaging Forum of the Packaging Institute, Inc., on Oct. 14, in Chicago, Ill.

aerosol, by virtue of the penetrating nature of its fine spray, makes it easier to apply medicaments to inaccessible or hairy areas of the body.

Several new products have been introduced recently at both the ethical and proprietary levels. The projected success of many of these items indicates that the increased cost of the aerosol package (as compared with the conventional collapsible tube, jar or bottle dispensing of the products) is no deterrent. Some merchandisers feel that certain aerosols for topical use will relegate their nonaerosol counterparts to obsolescence. It is probably well to inject a note of caution at this point. The mere changing of one packaging form to another, such as the conversion of a product from a bottle, jar or tube to an aerosol package, *does not* insure the success of the product. The aerosolized version must necessarily perform some function which is not performed by other packaging media or it is destined to be a fad on the market. Recently Tailby-Nason has test marketed Betadine aerosol spray (a compound Povidone iodine) for use by the physicians at the presurgical and post-operative stages. This product is packaged under an inert atmosphere of nitrogen in a plastic coated glass bottle which assures maximum stability of the iodine complex throughout the life of the product. Tests by physicians and hospitals indicate that this product is highly acceptable.

One of the newest ethical aerosol pharmaceutical items is one containing prednisolone for treatment of allergic and inflammatory skin infections, including dermatitis due to allergies, food, infantile and nummular eczema, and contact dermatitis due to rhus poisoning, the medical term covering irritations caused by contact with poison ivy, poison oak, and sumac. The new aerosol, according to its manufacturer, produces an instant cooling effect that provides rapid relief from the itching of inflamed skin and leaves an almost invisible film of colorless, stainless, water-washable medication that does not interfere with the patient's appearance or activities. Perhaps even more important, its manufacturer says, the aerosol spray, by obviating the necessity of manual contact with lesions, minimizes the likelihood of introducing additional irritants to involved areas and thus avoids the risk of contamination and infection. It also provides, the claim is made, greater surface coverage per unit of active ingredient than is possible by other application methods.

Another product which portends to be a boon to the adolescent is an acne foam product which will be on the market shortly. This product has been tested clinically and was found to be 86% effective against various types of acne. The merits of this product lie in its complete cosmetic acceptability and its ability to spread with amazing facility and to blend with the natural skin coloration. These factors induce continuous treatment among the adolescent set which is extremely important in acne control. This product, because of its wide spectrum of therapeutic medicaments including sulfur, resorcinol, antiseptics and antibiotics, is packaged in a plastic coated bottle with a foam dispensing nozzle. Generally the estimated 1957 retail market for several product categories for external use was about as follows:

Product	Estimated 1957 Retail Market
External Analgesics	$82,950,000
External Antiseptics	36,970,000
Foot and Athlete's Foot Medications	20,960,000
Burn Remedies	9,490,000
Poison Ivy Remedies	9,970,000
Total	$160,340,000

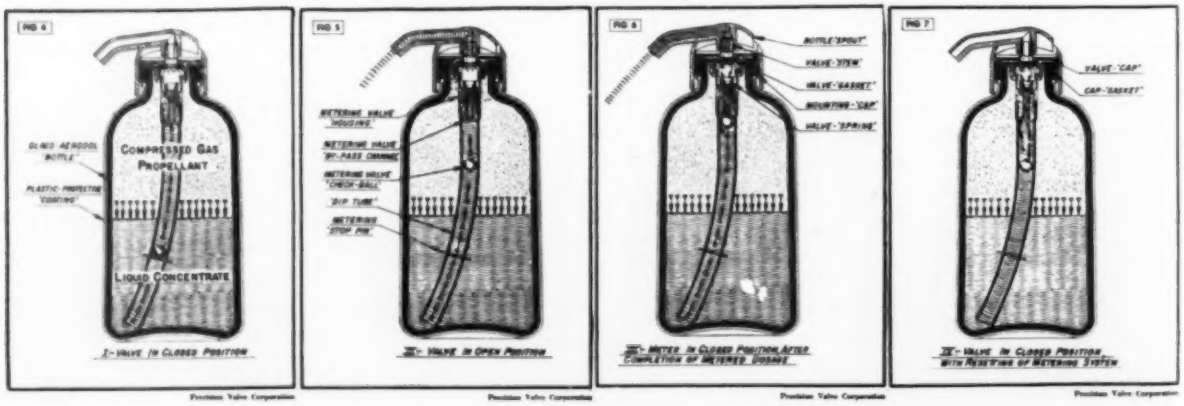
Inhalation Therapy Aerosols

Probably the greatest area for exploitation lies within the inhalation therapy field. Aerosol products for inhalation therapy have achieved remarkable success by Riker Chemical Corp. This situation has been wrought by a vast research program and a pioneering and progressive spirit by management and the various technical levels of Riker. Various upper respiratory ailments can best be treated by aerosolizing the medicaments for optimum and immediate relief of asthma, hay fever and asthmatic bronchitis by the selection of the proper propellants and their ratios and the proper particle size of the medicaments. By means of this very unique method of administering a drug, local or systemic effects of the medicaments can be achieved from the sinus area to the bronchioles.

Almost every day in the technical and medical literature one finds significant articles concerning the sys-

(*Continued on Page* 53)

The interior functioning of the check-ball nitrogen metering valve. In the diagram at right the ball is returning to the metering stop pin.



Rx for Aerosol Packaging...

Do It Yourself*

By Robert A. Foresman, Jr.
Aerosol Consultant
Philadelphia 24, Pa.

MY acceptance of the invitation to present this paper, more or less indicates that I am a protagonist of "do-it-yourself" aerosol filling. It is also true that I feel that the course of aerosol industry development in the coming years lies in that direction. However, it seems to me that my object should be to highlight the factors which can influence a decision to undertake production of aerosols within your own walls, rather than to simply present a sales pitch for installing an aerosol filling plant.

For the most part, decisions concerning a production facility are economic, but in the field of pharmaceuticals there may be a long standing policy which will carry more weight than the simple dollars and cents analysis of the operation. In some cases, the policy of a company may be to buy all products from contract suppliers who must comply with the company's rigid purchase specifications, thus leaving it (the company) free to concentrate on sales, promotion, distribution, education of the using public, etc. In other cases, all products, regardless of specific production efficiency, will be produced by the company concerned. The approach in either of these cases will not be influenced by anything outlined here. It is those whose decision is still open that this paper will serve to benefit.

To this end I will touch on the disadvantages as well as the advantages of a "do-it-yourself" approach.

Disadvantage No. 1—Capital Outlay.

Without going into specified figures at this point, the disadvantages of a capital outlay as compared to current expense outlays (contract filling fees) under our present tax structure are well known. What the influence of this factor will be in any given case must be for each one to decide for himself, but no decision should be made without considering this aspect of the use of your money.

Disadvantage No. 2—The Time Lag Required in Learning to Handle Aerosol Production Properly.

This of course is of only transitory concern; but, unfortunately, can bear heavily on the initial economics of your operation. As production with new equipment and people strange to the operation is undertaken, it must be expected that there will be some lag in quality and quantity of production for at least a short time. If you are prepared either to use this initial irregular quality without damage to your reputation, or on the other hand to bear the expense of discarding it, this factor disappears in large part. Steps can be taken to minimize such losses, but they will occur inevitably to a greater or lesser extent. Of course the quantity output can be covered by an adequate time allotment for inventory build-up.

Disadvantage No. 3—Lack of Initial Formulas.

Formulas can present a problem if you are new to the industry and are contemplating a line of aerosols and desire to get into production, without delay, with a proved line of products. In a "do-it-yourself" program the advantage of proved products, resulting from the research carried on by the contract fillers, is not available. On the other hand, many and perhaps most of the pharmaceutical type aerosol products are developed in the laboratories of the pharmaceutical companies. This is as it really should be and where it applies there of course need be no formula worries.

Disadvantage No. 4—Purchase Inefficiencies.

Purchasing in the smaller quantities necessary for a single line of products, as compared to the quantities purchased by contract fillers, may result in higher component and propellant prices. This factor may be more important than it appears, as occasionally the price break differentials can nearly equal the contract filler's fees. This item should be thoroughly explored before a decision is made. In addition to actual price disadvantages, it is possible that for experimental short runs, or pilot quantities, purchases of even minimum quantities of components or special propellant gases can load your shelves with supplies that may never again be used, while a contract filler could have supplied the same item out of his stock

(Continued on Page 49)

*Reprinted from complete paper presented at the 20th Annual National Packaging Forum of the Packaging Institute, Inc., on Oct. 14, in Chicago, Ill.

Rx for Aerosol Packaging...

Use a Contract Filler*

By John C. Armstrong
Armstrong Laboratories, Inc.
West Roxbury, Boston 32, Mass.

AT the outset of this article, I would like to make it clear that we of Armstrong Laboratories *do not* think that, ultimately, the contract filler can do a better job in all respects of packaging aerosol pharmaceutical products, than the drug manufacturer. We do think, however, that initially the custom filler can save time and grief in getting aerosol products under way, and that he is able to provide a number of advantages that in most cases make it advisable to continue to employ the services of a properly qualified aerosol contract filler.

Let us suppose that X company is considering an aerosol application for their Product A. Approval has been granted for research and product development work on Product A in an aerosol version. The research phase for Product A has developed satisfactorily. What is X company's next step?

They might investigate the available aerosol filling equipment suitable for filling Product A, along with trained personnel, space, and all the ramifications that go with undertaking to do it themselves.

It is our opinion that the logical conclusion at this point is to take advantage of the facilities which now exist through the qualified aerosol filler.

The advantages to this course of action are as follows:

1. The immediate availability of several hundred filled samples, as well as production equipment for laboratory and clinical evaluation.
2. Highly trained personnel with aerosol "know-how."
3. The availability of specialty developed equipment which can be demonstrated to be effective for a particular job.
4. Minimum investment and fixed unit costs.

LET us assume that up to this point the selection of the qualified aerosol filler has proven to be a wise decision. X company is well satisfied with the performance of Product A in aerosol form. This has been indicated by the results of the clinical tests and initial market acceptance. The next decision of X company is whether to continue with a contract filler, or to install its own facilities.

The additional reasons for staying with the contract filler at this point are:

1. The fact that the same production facilities will be used that have yielded good results with the units for the clinical tests and initial test market requirements, provides good assurance of satisfactory production in larger volumes.
2. The avoidance of high machinery obsolescence in the rapidly expanding aerosol industry.
3. X company may find that unless it gears down its production, its aerosol personnel may be idle, or must be relocated, during six months of the year, or more. This, of course, also applies to the aerosol machinery investment.

Let us assume now that the contract packager has been packaging Product A for a period of one or two years. The initial market tests have been completed—the pipe lines are filled. Because of competition, slow consumer education, or other reasons, the repeat sales are a great disappointment, and X company decides to drop Product A in aerosol. How much better it was to have had Product A packaged by a contract aerosol filler: Indeed, if X company had the heavy investment in its own facilities, it might not be able to make the wise decision to drop the product.

On the other hand, however, let us say that Product A in aerosol is a huge commercial success, and that, in the considered opinion of X company it will pay to put in its own facilities. Having used the contract aerosol filler up to now will have paid big dividends. X company's future aerosol personnel can gain invaluable experience by the observation of Product A being packaged at the contract filler's plant. Furthermore, the proper selection or design of machinery can be made through the advice of the contract filler, and his experience with relation to the particular problems encountered in the filling of Product A.

Any qualified custom filler will always offer to advise the customer on the proper approach to filling aerosols themselves. In other words, without making a capital investment in machinery until there is reasonable assurance that it can be used efficiently, the drug manufacturer can train

(*Continued on Page* 57)

*Reprinted from complete paper presented at the 20th Annual National Packaging Forum of the Packaging Institute, Inc., on Oct. 14 at Chicago, Ill.

A Pictorial Visit To Givaudan's

New Aerosol Research Laboratories

ONE of the most completely equipped aerosol laboratories in the industry is maintained by Givaudan-Delawanna, Inc. in its new company headquarters at 321 W. 44th St., New York City. Givaudan moved into the new offices in May of this year after many years at their former New York location in the McGraw-Hill Building on 42nd Street.

Company perfume research and administrative personnel already seem to be completely at home in the new quarters which are more commodious, equipped in thoroughly modern fashion, and well arranged for efficient operation.

The aerosol laboratory is only one of the creative and service laboratories which Givaudan maintains at its New York offices. There are also three flavor laboratories, one cosmetic laboratory, twelve perfume laboratories, a soap laboratory, an instrumentation laboratory and a model kitchen for the flavor department. General research laboratories are located at the Delawanna, N. J. plant.

All the laboratories are air-conditioned and dust-free. Air is constantly being changed and purified to assure optimum conditions for checking odors and to guard against contamination. Also positive air pressure is maintained in hallways and corridors, and negative pressure in each laboratory, so there can be no transfer of odor from one laboratory to another.★

The perfumer prepares a blend of aromatics for a specific application. All the Givaudan laboratories are equipped with modern electronic balances.

Aerosols are subjected to a hot water bath before being released to check possible leak sources. Metal basket contains any defective samples.

The perfumer-chemist pressure fills a glass aerosol on a Foresman liquefied gas manipulator at the new Givaudan-Delawanna aerosol laboratory.

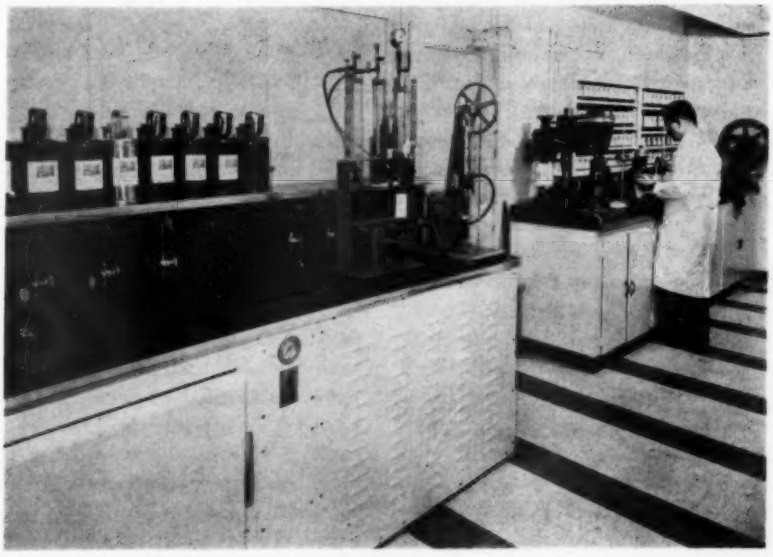
An aerosol container is being charged with nitrogen. All types and makes of propellants are available for laboratory testing procedures.

Laboratory equipment includes various capping, crimping and sealing devices. Here the perfumer-chemist is applying a standard seal which can be employed on both metal and glass containers.

Standard procedure in testing aerosol formulations and fragrances is the heat test. Here products are being oven tested to ascertain whether there has been any odor change on exposure to heat.

Performance evaluation of perfuming materials is facilitated in this customer laboratory. A complete collection of Givaudan aromatics, compositions and specialties is maintained here for customer use.

In the left foreground are the spigots through which liquefied propellants are obtained. On the right a foam product is being prepared prior to loading.



Canadian Chemical Specialties Manufacturers Meet in Montreal

The new Queen Elizabeth Hotel, Montreal

RESERVATIONS and advance registrations from both the U.S. and Canada are pouring into the headquarters of the Association of Canadian Chemical Specialties Manufacturers as that newly formed group makes final plans for its first annual meeting Nov. 12-14 at the Queen Elizabeth Hotel, Montreal.

Though the formally-scheduled meeting takes place on November 13 and 14, the first day of the convention will be taken up by a meeting of the association's board of directors in the morning and a program planning meeting in the afternoon for each of the association's divisions. Aerosol and Pesticide Forums are scheduled for the final two days of the session.

On the afternoon of Thursday, Nov. 13, two important aerosol papers will be given:

The Present and Future Role of Silicones in Aerosols, by John A. Fisher, Dow Corning Silicones, Ltd., Toronto.

Development of Metal Aerosol Containers — Past, Present and Future, by J. Demsey, Continental Can Co. Ltd., Montreal.

That same afternoon the Pesticide Division will discuss the possibilities of collaborating with the Canadian Beautification Association in that group's annual spring campaign. CBA chairman, Bearce P. Campbell and Ralph Howard, of the Wisconsin Alumni Research Foundation, will be the principal speakers.

The evening of Nov. 13 will be devoted to a company open house.

On the following day the Pesticides Division will hear an important address on "Trends in Legislation" by C. H. Jefferson, head of the Plant Products Division, Federal Department of Agriculture, Ottawa. A paper on "Household Insecticides—A Scientific View," will be presented by Sterling MacLeod, also of the Federal Dept. of Agriculture.

On the afternoon of Friday, Nov. 14, the Aerosol Division will hold another forum. This will include the following papers:

The Technical Aspects of Aerosol Packaging by Grant L. Armstrong, DuPont Co. of Canada, Ltd., Montreal.

Nitrogen Aerosol Propellants by a representative of Precision Valve Corp., Yonkers, N. Y.

Sale of Household Chemicals to the Consumer by G. H. Wood, G. H. Wood Co., Toronto.

The final evening of the convention will be devoted to a cocktail party and a banquet.

A number of tours of historic Montreal will be available to those attending the convention, and to the wives in attendance. Nearly 300 people are expected to attend.★

Root Addresses Oil Chemists on Surface Active Agents

AEROSOL industry use of surface active agents will increase considerably with the advent of nitrogen as a propellant for pressure-packaged products. This was reported by Morris J. Root, technical director of G. Barr and Co., Chicago, major aerosol contract packager, in a paper delivered before members of the American Oil Chemists Society, meeting Oct. 22 in the Hotel Sherman, Chicago.

Mr. Root explained that the use of nitrogen in pressure packaging has made it possible "to expand vastly" the numbers of products suitable for aerosol dispensing. Many of the newcomer products, such as tooth paste, hand lotions, hair dressings and vitamins, require surface active agents for various purposes. There were few applications for surface active agents in aerosol products propelled by liquefied gases. Many nitrogen-propelled products require the surface active agents for detergency, emulsification, wetting, conditioning and dispersing, Mr. Root said.

He also reported that products including surface active agents must be formulated for pressure with careful consideration to corrosion. He presented data on corrosion characteristics of anionic, cationic, non-ionic and amphoteric surface agents.

First Pressurized Coffee is Introduced by New York Company

THE first pressurized coffee package on the U. S. market was introduced nationally early this month!

Tasti-Cup Coffee Corp., 135 Front Street, New York, unveiled its nitrogen-propelled product in the November issue of *Gourmet*, national magazine for the food specialty field. It is packaged in a 12-ounce Crown "Spra-tainer" and uses a Precision nitrogen valve.

The product will appear nationally all over the country by the first of January, probably beginning with delicatessens and other specialty stores before reaching supermarkets sometime after the first of the year. Present plans call for it to retail at about $1.25 for the pressurized equivalent of one pound of ground coffee, which will provide 48 to 50 cups of coffee with normal usage.

Called "Tasti-Cup," the package carries a brilliantly colored brown and gold label. The container must be kept under refrigeration, both at the point-of-sale and in the home. M. J. Kahan, president of the company, points out that the refrigeration method of preservation has enabled the company to package the coffee concentrate without the harmful pasteurization process, which carmelizes the carbohydrates and breaks down the essential oils so vital to aroma. He reports that more than a year of experimentation has revealed that the refrigeration method offers the best chance for maintaining the flavor, aroma, and appearance of the concentrate delivered from the spout of the aerosol container.

Mr. Kahan also reports that his company has devised a system of filling the container with only eight ounces of concentrate (in a 12-ounce container). This, he says, insures that the consumer will be able to get all of the product out in the majority of cases, and at the same time will serve to offset the psychological disadvantage of some nitrogen aerosol marketers who must, of necessity, formulate their products to allow up to 15% of the product to be retained in the can after the propellant has been used up.

TASTI-CUP'S advertising, both on its label and in its first advertisement in *Gourmet* (and another in *Tellefoods*, a trade publication that goes to food brokers and distributors) roundly proclaims the advantages of pressurized packaging. "Pure liquid concentrate that remains under constant vacuum" and "It's fresh" proclaims the label. The company's advertising also calls it the "Closest thing to the perfect cup of coffee since the invention of instant coffee," and the "True Instant Coffee."

As is well appreciated by the pressurized packaging industry, the product concentrate is kept fresh throughout the life of the can (so long as it is kept under refrigeration) by the compressed nitrogen expanding to fill the headspace. Under refrigeration, the company reports, the planned shelf life of the product is six months, which would indicate that extensive compatibility tests have been carried out with various can linings and valve components. Though the dispensed concentrate is comparatively heavy, the added gas used to pressurize the product prevents any tendency of the valve orifices to clog.

To insure the success of its product at the retail level, Tasti-Cup has designed its label to stress the advantages of its product over conventional ground and instant coffees. On the reverse side, for instance, recipes are given for coffee milk and coffee soda —two concoctions not practical with conventional instant coffee. For the first of these, the label advises mixing one teaspoonful of the product with about eight ounces of cold milk, then sweetening with about a teaspoonful of sugar. For the second, the label advises mixing one teaspoonful of the concentrate with eight ounces of club soda, again with some sugar for sweetening. The company also suggests that iced coffee can be made by simply dissolving the concentrate in ice water and pouring in cracked

(*Continued on Page* 60)

Among the aerosol exhibitors were DuPont, Kerr Chemicals, Virginia Smelting, California Spray Chemical, Miller Chemical, and Lenk.

Insecticides, Paints, New Product Types Highlight Aerosols at Hardware Show

AEROSOLS seemed to dominate individual package types as the National Hardware Show, the largest retail hardware products show in history, wound up a week's stand at New York's huge Coliseum early last month. Many exhibitors in the Garden and Outdoor Section (which occupied two entire floors of the Coliseum) and many more in the general section showed new pressurized products ranging all the way from the now familiar paints and insecticides to an aerosol cartridge-type dry insecticide sprayer and the first nitrogen-powered glue.

In several company exhibits, in fact, one or more aerosol products dominated the entire exhibit. Falling into this category were Flamemaster Chemicals, the Garden Division of Boyle-Midway, Seymour of Sycamore, Kerr Chemicals, Virginia Smelting Co., Speco, Dupli-Color, Lenk Manufacturing, Cling-Surface Co., and Metalcraft Manufacturing.

Though paints and insecticides seemed to outnumber other aerosol product types on display, several fairly new products received more attention this year than ever before. Among these were pressurized propane-butane cartridges (displayed by Lenk, Metalcraft Manufacturing, and Otto Bernz Co.), gibberellin plant growth products (Virginia Smelting, Nott Manufacturing Co., Amchem Products), insect repellents (DuPont, Kerr Chemicals).

Among the insecticide products, the new "Eveready Garden Gun," actually a hybrid aerosol using a pressurized "UCon" can as the propelling power, received considerable attention from the wholesale and retail hardware dealers at the show. The gun will retail for $14.95, with each additional 16-ounce cartridge costing $2.49. Each cartridge will enable the user to spray over 80 pints of insecticide. National Carbon Co., a division of Union Carbide Corp., New York, is the developer and marketer of the new device.

National Carbon also showed its two garden-type aerosol products (introduced earlier this year) "Eveready Rose Spray," retailing at $1.75 and "Eveready Home & Garden Spray," also 12 ounces, which retails for $1.50.

Other aerosol exhibitors, with their products, were:

Lenk Manufacturing Co., Franklin, Ky. showed a butane-propane blowtorch unit called the "Aero-Torch," as well as a soldering iron and a patio lamp using the same type of cartridge for its heating fuel. Also shown was Lenk's aerosol fire extinguisher.

DuPont's Garden Chemicals Divi-

Bombs Away

Pyrenone* Concentrates Will Put You On Target For Bigger Aerosol Sales in 1959

Now's the time to set your sights on a larger share of the growing aerosol market.

To accomplish your mission in the coming year, we suggest that you add one or more aerosol insecticides to your line. The addition will help you to bring down the high cost of distribution. But above all, be sure to put dependable, time-tested Pyrenone in your product.

It's an *exclusive* combination of technical *piperonyl butoxide* and *pyrethrins*—two active ingredients known throughout the industry for *proved* safety and performance.

Pyrenone concentrates are available for a wide range of non-toxic aerosols . . . roach and ant sprays . . . insect repellents . . . pet sprays and pet shampoos . . . plant sprays . . . highly-concentrated metered aerosols . . . and special types of pressurized insecticide sprays, either toxic or non-toxic.

For complete information, including expert technical guidance and sample label statements, get in touch with the nearest office of Fairfield Chemicals. You'll find convenient branches in principal cities. Or in Canada, write Natural Products Corporation, Montreal and Toronto.

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sion again demonstrated its diethyl toluamide insect repellent and its tree wound dressing, as well as a score or more of conventional non-aerosol products.

The Boyle-Midway Division of American Home Products, Inc. showed its entire line of home and garden products, including its "Rose Spray," "African Violet and House Spray Insect Bomb," "Antrol Leaf Shine," and "Ridz Dog and Cat Repellent."

Kerr Chemicals Inc., Park Ridge, Ill., surpassed Boyle-Midway for the most and most varied number of aerosol products, and the "Kerpro" display included many new products seen publicly for the first time. Among the products on exhibit were liquid electrical insulation, a degreaser for engines and machinery, an ethyl hexanediol insect repellent, a pet spray, five different scents of room deodorant, Kerpro's standard insect killer plus a non-DDT "non toxic" insect killer, moth proofer, ant and roach spray, plant spray, and a wide variety of paint products.

Flamemaster Chemicals, Culver City, Ind. elicited considerable attention with its booth, most of which was devoted to its nitrogen propelled white glue product, the first such product ever developed. Also shown were the company's line of pigmented and clear aerosol paint sprays, its "Metaltone" hammered sprays, and its "Perma Glide" lubricant.

California Spray Chemical Corp., Richmond, Calif., exhibited its growing line of pest control products, including "Rose and Flower Bomb,"

The "Eveready Garden Gun," introduced by National Carbon. Trigger is in handle.

Flamemaster Chemicals' booth featured (in addition to a pretty girl) the company's "NU-GLU" nitrogen - powered glue and its "Metaltone" hammered sprays (at right).

"Dog Repellent," Ant and Roach Bomb," "Household Insect Bomb," "Home and Garden Insect Bomb," "Screw Worm Bomb," "Indoor Plant Bomb," and "Leaf Polish." All of these appear under Calspray's "Ortho" trademark.

Seymour of Sycamore, Inc., Sycamore, Ill., a leading aerosol paint marketer, devoted its entire booth to its aerosol "Spray Pack" enamel and lacquer line. Retailers visiting the booth were given color cards showing the range of the company's colors.

Virginia Smelting Co., West Norfolk, Va. showed its new diethyl toluamide product, part of a newly-introduced "Sprayrite" line that includes a gibberellic acid plant growth stimulant, African Violet spray, animal repellent, flea killer and deodorant for dogs, rose and flower garden spray, plant polish, and a "miracle ripener" for tomatoes. The three aerosol insecticides are advertised as "the only pleasantly scented aerosol containing malathion." With the new labels, each of the products bears a family resemblance to the others, through each has its own identifying label color.

National Bird Control Laboratories, Skokie, Ill. showed its "Roost No More" bird repellent. The product, a gummy substance designed for application on window ledges, roof ridges, gutter troughs, etc., is being marketed in an aerosol can with a Clayton valve.

Cling Surface Co., Buffalo, exhibited its brand-new "Sta-Put" non-skid spray for rugs. The container delivers a rubberized backing for throw rugs that will reportedly last about four months for each application.

Amchem Products, Inc., Ambler, Pa., formerly the American Chemical Paint Co., showed its gibberellic growth stimulant spray.

Magic Iron Cement Co., Cleveland, featured its "Magic Easy Spray Enamel" line of 16 different color paints, each of which will retail at $1.89.

Speco, Inc., Cleveland, featured its "Lith Rem" water repellent for leather. The product is said to increase the strength and resistance of leather to abrasion and heat by as much as 50%. Also shown were "Slikote," a silicone spray to prevent snow sticking on snow shovels, and "Rain Rem" a water repellent for fabrics.

Dupli-Color Products Co., Chicago, had an eight-foot tall aerosol can to draw attention to its product line, 18 enamels and five hammered finish sprays.

Nott Manufacturing Co., Beacon, N. Y., exhibited "Dog Check" (an animal repellent), African Violet indoor spray, the "Tri-Ogen Rose Bomb," and "Plant Shoot," a gibberellic acid plant stimulant.

W. J. Ruscoe Co., Akron, exhibited its "Dependable Penetrating Oil," a product containing molybdenum disulfide plus something called "DPX No. 16."

B. G. Pratt Co., Paterson, N. J., showed its "D-X Aero-Spray" which contains synergized pyrethrum and rotenone for interior use; and its "Rose and Floral Spray" for exterior use.

Boyer Chemical Co., Evanston, Ill.

(*Continued on Page* 57)

Aerosol Product Ideas for You!

Are you interested in aerosol pharmaceuticals, cosmetics and toiletries? Cosmetics are the leading sales producers right now and pharmaceuticals will probably make the next big break-through in aerosol marketing. Or are you interested in aerosol household products, whose sales continue to boom?

If so, you'll want the helpful *Product Information Bulletins* prepared by our "Genetron" Aerosol Technical Service Laboratory on many new as well as established products.

They're free. They contain such basic information as: typical aerosol formulations . . . application methods . . . advantages offered by the proposed aerosol product . . . packaging suggestions . . . data on stability, flammability, pressures, etc. . . . . competitive products.

The bulletins presently available are listed for your convenience in the coupon at right. Others are continually being prepared, and we will be glad to send them to you if you would like to be put on our mailing list.

One of these product suggestions may be just what you've been looking for to help you tap the dynamic aerosol market! So check the coupon for the bulletins you want and mail it *now!*

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- ☐ Neomycin Spray
- ☐ New Hair Spray
- ☐ Poison Ivy, Oak and Sumac Remedy
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Various plastic coated bottles. The one on the left in the photograph below is a black-coated Italian-made Vap-sol bottle. The bottle in the center is a rayon flock coating over PVC. At right a coated bottle has been smashed. The smashed bottle illustrates the holding qualities of the coating material.

Plastic-Coated Glass Aerosol Containers

By Nigel Vinson
Durable Plastics, Ltd.
Guildford, Surrey, England

TO some one relatively new to the aerosol business the idea of packaging a particular product in a plastic coated bottle may appear grossly impractical. Why not use a metal can, or an all plastic bottle? Why not use a plain glass bottle and be done with it? Actually, there are good logical answers to all these questions.

The metal container is obviously one good answer—providing it will do the job. There are, however, severe limitations to the use of metal as a container material for certain products. The shape must remain basically cylindrical, and the interior coating assumes tremendous importance. For many aerosol products the protective coatings, commercially available at a reasonable price, are *not* sufficiently corrosion resistant. Also, they might contaminate or react chemically with pharmaceutical and other critical products that are to be packaged in coated metal containers.

Plastic bottles can be made satisfactorily only from polyethylene or nylon, and under most higher aerosol pressures any shape other than a sphere tends to bulge slightly and thus become unattractive. At the same time, the tooling costs for comparatively short runs of plastic bottles are relatively high, and in many cases neither nylon or polyethylene is resistant enough to the aromatic hydrocarbons and other solvents commonly formulated with aerosol products.

Logically then, this leaves no other practical choice for many products than a glass bottle. As is now commonly known throughout all phases of the packaging industry, glass is completely sterile, is totally resistant to attack by most chemicals, and at the same time is able to withstand considerable internal pressure.

However, it has been proved that, should such a pressurized uncoated aerosol bottle be dropped accidentally onto a sufficiently hard surface, glass fragments will fly for many feet in all directions, and can cause serious injury. For this reason many packagers in Great Britain and the U. S. have shied away from uncoated glass as a material for packaging their products under pressure.

The only practical safeguard against this hazard is to protect the glass with a flexible plastic envelope, not less than .015 inches thick. This envelope has a twofold function, in that the glass bottle is less likely to break if is dropped; and, if it should break, the plastic will expand to hold the rapidly expanding gas, and then gradually collapse as the gas escapes through small perforations in the coating that are made after filling. Since water testing of the valve cap is employed after filling (in some operations), it is essential that these perforations be made as the *final* step in production. This insures against the seepage of water inside the coating.

The coating operation is not as simple as it would appear at first sight. Polyvinyl chloride is the only really satisfactory material developed to date. It has a good degree of elasticity, toughness, and can be applied either as a transparent or attractively colored coating. To build up the requisite deposit of .015 inches, the bottle has to be heated and then dipped into cold P.V.C. paste. The heat retained by the glass gelates this paste and the thickness of the coating

(Continued on Page 56)

AEROSOLS in review

Shelf Testing Discussed in British Article

AN excellent article on accelerated and normal shelf testing for aerosols is included in the September issue of *Packaging*, British trade magazine. The article, called "Lab Tests for Aerosols" was written by John H. Briston, chief research chemist of Sparklets, Ltd., who has authored a whole series of technical articles in *Packaging*.

As a rough guide, Mr. Briston suggests that the shelf life at 95° F. should be multiplied by three to give the equivalent shelf life at 77°. "On no account, however, should tests be carried out only at elevated temperatures.

"In general, increases in temperature will increase the corrosion rate but there are sometimes complicating factors which can completely reverse this. One example we experienced was that of a perfume formulation in an aluminum container which showed severe pitting corrosion after one month at 77° F. yet was hardly affected after two months at 95° F. Inspection showed that the pitting corrosion was concentrated at the liquid/vapor interface and was associated with the deposition of resinous material from the perfume. The increased solubility at 95° F. prevented this deposition and the effect of the corrosive component was thus very widely dispersed.

". . . The effects of high temperatures are not limited to metal components only. Any attack by the contents of an aerosol on the plastics materials used (such as syphon tube, actuator button, etc.) is usually accentuated by a rise in temperature. Any tendency toward valve jamming due to swelling of the rubber sealing gasket will also be aggravated by high temperatures."

Among the other tests Mr. Briston suggests is one to quickly check external container decoration for a particular product. "A suggested procedure is to spray samples of possible decorations with the finished formulation and allow to stand for 24 hours. After washing, the decoration may be examined for 'bleeding,' blistering, bleaching, or 'lifting'."

As an accelerated method of testing the rubber components of a valve the author suggests:

"Small discs are cut from a sheet of the particular rubber used in the valve under consideration. The mean thickness of, say, half a dozen of these discs is measured accurately and the discs are then placed in an aluminium aerosol container, together with the sample formulation. The container is sealed and is then held at some standard, elevated temperature for a definite time.

"At the end of this time the container is cooled to below the boiling point of the propellant and is then opened. After lightly blotting off excess liquid, the mean thickness of the discs is measured and the percentage swell calculated. The maximum allowable swelling (as determined for some standard set of conditions) can be found by experience for any particular design of valve.

"The use of an aluminum container is advocated for reasons of strength since temperatures of the order of about 130° F.-140° F. are necessary if the duration of the test is to be kept to a reasonable figure (say about 24 hours)."

•

THERE is a limitless future for aerosol foods, in the opinion of Dr. Francis A. Mina, technical director of Lodes Aerosol Consultants, as quoted in an interview article in the October 9th issue of the *New York Journal of Commerce*. Some industry sources predict that sales of aerosol foods will exceed 500 million annually by 1959. Aerosol food sales may shortly surpass sales of all other non-food aerosol products, in Dr. Mina's opinion.

Reasons cited are:

"Aerosol packaged foods would be used constantly—perhaps every day and the year round by all members of the family—whereas such products as aerosol hair sprays and paints are used only occasionally.

"The economic factor is favorable as, while initial cost of an aerosol might appear high, the cost per serving or use would be less, as waste could be reduced."

•

THE coming of the aerosol paint package has done much to spice up paint labels in general, declares an article in the Sept. 18 issue of *Paint, Oil & Chemical Review*. Aerosol sales, for the most part, are "impulse" sales, where the label can make or break a sale. "Some companies prefer a reasonably dignified approach; others go for gaudy colors; still others use the carton treatment. Which is best? There's just no way of telling. Aerosol paints have sold under all three types of labels. The real point is this: a study of aerosol labels will give you a lot of ideas, some of which have potential value to your own applications. The only cut-and-dried thing about label design is that yours can either help sell or can help sell your competitor on the next shelf sell!"

The article quotes Jerald O. Page,

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Aerosol packaging creates new popularity . . . and new sales . . . for pharmaceutical products. Spray-on bandages, pressurized ointments, aerosol antiseptics, bronchial and nasal sprays are typical of the pharmaceuticals that have taken advantage of this modern packaging technique through ISOTRON propellents.

High-quality ISOTRON propellents meet exacting requirements for pressure, stability, solubility and particle size. ISOTRONS are nontoxic, nonflammable, noncorrosive. They're backed by over 40 years of *specialized* Pennsalt research in fluorine, the chemical that gives propellents their stability.

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Bridgeport, Conn.
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Danville, Ill.
Eveready Pressurized Products
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Fluid Chemical Company, Inc.
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Baltimore, Md.
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Texas Aerosols, Inc.
Houston, Texas
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Norristown, Pa.
Wester Filling Corp.
Los Angeles, Cal.

ISOTRON—The Key to Modern Living

who designed United Wallpaper's line of "DeSoto Aero-Spray" enamels. Among the "good" points Mr. Page advises the designer to shoot for are:

"1. Include only the necessary pertinent information on the front of the label—keep the layout free of extraneous elements.

2. Use colors that are strong and visually stimulating. Weak pastels make poor packages.

3. Check federal regulations on the labeling of paints. Formulas on the label are usually a must.

4. Allow plenty of room for directions to be set in ten point type (the same size as this copy).

5. Make imprint space a part of regular design.

6. Take into consideration how the design will adapt to revised literature or how it will change existing literature.

7. Always field test a package if conditions permit."

As points to avoid, Mr. Page suggests:

"1. Don't use design elements that distort badly when wrapped around the cylindrical shape of the can. A circle does not appear as a circle but as an ellipse when wrapped around a can.

2. Don't run printed matter so far around the curve that legibility is impaired.

3 Don't make the elements on the can front too small or too illegible to read from about eight feet away.

4. Never use outmoded trademarks as a major design element. Either redesign the trademark or use it in an unobtrusive fashion.

5. Don't underestimate the memory value of bold visual symbols. Research shows that they are remembered longer than either words or brand names."

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THE same periodical, *Paint, Oil & Chemical Review*, carried an interesting paint survey in its August 21 and Sept. 4 issues. Staff men of the magazine questioned dealers, architects, contractors, and the general public in the Peoria, Ill. buying area.

Among the interesting findings of the survey are that "Women, who complain more about preparation and cleanup, should have liked aerosol paints more than men. They didn't and the survey unfortunately didn't ask why." The specific question in this instance (with the answers) was:

"Have you ever used aerosol paints?

	Men	Women
Yes	20%	11%
No	76	85

If yes, were you pleased with the results?

	Men	Women
Yes	63%	37%
No	37	63

Of equal interest to the aerosol paint marketer were the responses to the question "From your experience, what is the future for aerosol finishes?" Dealers, architects, and contractors, expressed the following opinions on the subject:

	Rapid Increase	Slow Increase	Same	Decrease	No Answer
Dealers	11%	43%	11%	—	35%
Architects	18	—	—	10	72
Contractors	9	14	23	14	40

Another question of interest to aerosol paint marketers was one directed at paint dealers:

"What proportions of your aerosol paint sales are in the following size containers?"

Six-ounce	*12-ounce*	*16-ounce*
To 50% 8	To 50% 4	To 50% 2
100% 2	50-95% 4	50-90% 5
	100% 5	100% 8

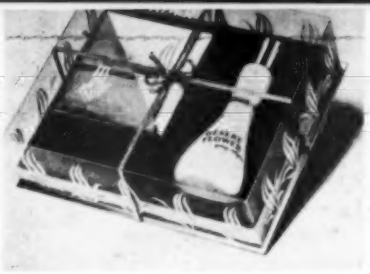
In its interpretation of these answers, the magazine suggests: "The point here is that eight dealers stock nothing but 16-ounce containers while only two dealers stock the old six-ounce size exclusively; that 13 dealers do over half their aerosol business in the 16-ounce size. Weight in the right-hand column indicates a trend to the bigger size, which is already established as a trend."

•

SOME observations on the future of food aerosols are contained in an article in the October, 1958, issue of *Packaging Parade*, under the title, "Aerosols: What Can Be Expected." It is predicted that "an upcoming major break-through in food aerosols could be a coffee concentrate. . . . Elimination of much flavor loss in manufacture, packaging in a container which remains airtight throughout normal use, and convenient dispensing are the claimed advantages."

The primary reason for the hesitancy of food manufacturers to enter the aerosol market has been worry about sanitation, it is suggested. Some food marketers have been reluctant to have test market runs done by contract fillers because they feared that since most packers deal primarily with non-food lines such as insecticides, hair sprays, paints, etc., they might be unfamiliar with or find it difficult to maintain the sanitation requirements and processing procedures essential in the packaging of a food product. The other alternative is setting up one's own aerosol filling line, but in view of the cost of approximately $100,000 "none are willing to risk this capital layout unless success of the pressure-packed product is rea-

(Continued on Page 59)



Shulton, Clifton, N. J., will market its **Desert Flower** in a special Christmas gift set retailing for $4.50. The set combines dusting powder and spray cologne.

Nursery Mist is a new product for fighting bacteria and deodorizing air in the nursery or baby's room. Krylon, Inc., Norristown, Pa., is the marketer of the six-ounce container, which can be used for 200 rooms. The product can be used safely on diapers, baby mattresses, and baby clothes.

Lanvin-Parfums, Inc., New York, this month will introduce the aerosol version of **My Sin** eau de toilette. Three-ounce Scovill Container is capped by a VCA valve, with bottle by T. C. Wheaton. Product will deliver about 1500 sprays and will retail for $5.

NEW PRODUCTS AND PACKAGES

Allstadt Manufacturing Co., Dallas, Tex. is currently packaging dichlorodifluoromethane in a disposable 12-ounce Crown Spra-Tainer. A special valve body screws into a three pronger clamp and by turning the can and holding the valve body stationary, the top is pierced. Product is designed for installers and servicers of automotive air conditioning.

Barbasol Co. of Indianapolis, has switched to a taller, thinner, American Can lithographed container for its **Presto** shave lather. Aerosol valve is by Precision Valve, overcap by Phoenix Metal Cap Co. 11-ounce can will retail for 79 cents.

Speed Shine, an aerosol wax product, has been introduced by Universal Spray Can Corp., New York. The six-ounce can will retail for 89 cents, the 12-ounce for $1.39. Product is reinforced with silicones and lanolin and is quick drying.

Marcel Martine, Ltd., New York last month introduced a powder spray called **Talc Mist.** Equipped with an Aerosol Research valve and cover and a Canco container, it was developed and is being packaged by Old Empire, Inc., Newark custom filler.

A new addition to the aerosol product line of Boyer Chemical Co., Evanston, Ill. is **Spraypower,** a spray belt treatment for the industrial field. The product, which prevents slipping of leather, rubber, and fabric belts was introduced at the National Hardware Show in New York.

CHLOROTHENE GIVES AEROSOL PACKAGERS NEW COST-CUTTING BENEFIT

Dow solvent lowers propellant costs and improves safety in hair sprays

As a vapor pressure depressant, Chlorothene® (Dow 1,1,1-trichloroethane, inhibited) cuts costs in several ways. It lowers propellant costs, provides higher solvency, and in many cases eliminates the need for additional solvents. Chlorothene can be mixed with the concentrate to facilitate handling and used with the same equipment as other components of the propellant system. And filling losses are reduced because of its lower volatility.

By substituting Chlorothene for part of the ethanol, flammability of the finished formulation is greatly reduced. This safety advantage, when added to lower cost, makes Chlorothene the product of choice in the formulation of personal aerosols.

Chlorothene offers outstanding advantages to manufacturers of hair sprays, spot removers, insecticides, waterproofing compounds and other formulations. Have you computed the savings you would realize by switching to Chlorothene? Many firms have and are pleasantly surprised at the new cost-per-unit picture. For facts about uses, properties and costs, write to us today, THE DOW CHEMICAL COMPANY, Midland, Michigan, Department SO 1155D-1.

YOU CAN DEPEND ON DOW

NEWS of Pressure Packaging

Gattone Forms New Company

Daniel H. Gattone—co-inventor of the much publicized Birch-Gattone patents in this country, Canada, and Europe, now

Daniel H. Gattone

heads the Lif-O-Gen, Inc. as president and chairman of the Board. The company's offices are located in Suite 601, 226 So. 16th St., Philadelphia 2.

Lif-O-Gen, Inc. was incorporated in the State of Delaware on June 11, to produce and market a product called "Lif-O-Gen." That product is an economical, pocket sized, disposable unit capable of supplying immediate oxygen in cases of emergency.

The founder of the corporation, Daniel H. Gattone, is the developer of the "Lif-O-Gen" unit. He was associated with a leading pharmaceutical company from 1945 to 1958, serving as sales manager for six years.

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Edwin Stalfort Dies

Edwin D. Stalfort, board chairman and co-founder of John D. Stalfort and Sons, Inc., aerosol custom filler, died on Oct. 13.

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Supermarket at CSMA Meeting

A supermarket featuring only aerosol products will be one of the highlights of the 45th annual meeting of the Chemical Specialties Manufacturers at the Commodore Hotel, New York, on Dec. 8-10. The supermarket display scheduled for Monday, Dec. 8 will be the feature of a special press reception for editors of consumer, retail, and the trade press, to mark the tenth anniversary of the formation of the association's Aerosol Division. After the press reception the supermarket will be opened to delegates attending the convention.

Among the principal speakers scheduled for the formal program at the meeting are George P. Larrick, Commissioner of Food and Drugs, FDA; Dr. Leona Baumgartner, Commissioner of Health, City of New York; and Justus C. Ward, head of Pesticide Regulation, USDA.

•

Bristol-Myers Wins Award

The coveted Corporate Award of the Packaging Institute for 1958 was presented to Bristol-Myers, Inc., in recognition of that company's commercial packaging of its "Ipana-Plus" dentifrice in an interior-lined polyethylene container. The award was made at the institute's 20th annual National Packaging Forum at Chicago's Edgewater Beach Hotel on Oct. 14.

The award is made annually in recognition of an outstanding advance in applied packaging technology to "that company which has commercially integrated packaging materials, equipment and methods in the packaging of its product."

Aerosol Awards Judges Set

The Publicity Committee of the CSMA's Aerosol Division last month announced the judges for its 1958 Aerosol Package Awards Contest. Results of the contest which will be judged on Nov. 19 will be announced at the 45th annual meeting of the CSMA at the Commodore Hotel, New York, on Dec. 9-11.

The judges are:

Benjamin Lerner, Sun Ray Drug Co., Philadelphia.

Irving Feldman, Zelart Drug Co., Westbury, N. Y.

Francis E. Blod, package designer, New York.

Miss Tedi Thurman, "Miss Monitor" of National Broadcasting Co., New York.

Miss Dorothy Cassidy, Managing Editor, *Bride & Home*.

Preston James Bell, publisher, Variety Store Mechandiser Publications, Inc.

Mrs. Dee Culmore Lincoln, housewife, Stony Brook, N. Y.

Mojonnier Associates Bought by Kartridg-Pak Machine Co.

The assets and the business of Mojonnier-Dawson Co. and Mojonnier Associates, Inc., leading aerosol filling machinery supplier, have been acquired by the Kartridg-Pak Machine Co., Chicago, a wholly-owned subsidiary of Oscar Mayer & Co., and a supplier of food processing machinery. Operations of the two companies will be combined into a single organization to be known as the Mojonnier Associates Division, Kartridg-Pak Machine Co.

Albert B. Mojonnier, founder of both companies, will continue as head of the new division, assisted by George Heath, a 12-year veteran of Oscar Mayer, who was named the division's general manager. According to Harold M. Mayer, president of Kartridg-Pak, all Mojonnier employees will be retained in the new organizational set-up, and the plant and general offices will continue to be at 9151 Fullerton Ave., Franklin Park, Ill.

Mr. Mayer declared: "In arranging for this shift of ownership, Mr. Mojonnier is able to draw upon the engineering and product development resources of the Kartridg-Pak Co., and he will also have assistance in the management of the affairs of the division. The acceptance and success of the Mojonnier product lines has enabled the companies to grow to a point where additional management resources and engineering and product development facilities were required."

Kartridg-Pak was organized in 1945 by Oscar Mayer to design and manufacture sausage processing machines. It currently produces a line of meat and food processing machines and packaging equipment which are sold or leased to the meat, dairy, and other food processing industries. Its plant is located in Davenport, Iowa, and it maintains sales and administrative offices in Chicago and Madison, Wis.

Midland Names Shepherd

H. R. Shepherd, president of Aerosol Techniques, Inc., Bridgeport custom filler, has been elected to the

H. R. Shepherd

board of directors of Midland Aerosols, Ltd., leading English custom filler. At the same time Midland announced the appointment of R. Taggart as director and general manager of Midland, Specialty Valves, Ltd., and London Aluminum (Containers) Ltd.

Mr. Taggart was formerly marketing manager for aerosols of the Metal Box Co., Ltd.

•

FTC Cites Max Factor

Max Factor & Co., Hollywood, Calif., last month was charged by the Federal Trade Commission with falsely claiming that its "Natural Wave" spray will make naturally straight hair naturally curly.

A Commission complaint cited the following television commercial as typical of the company's false advertising for the product:

A girl with straight hair is shown as the announcer says "Max Factor introduces Natural Wave! . . . a revolutionary answer to straight hair like this." The same girl then is pictured with curly hair, displaying the product and spraying her hair as the phrases "change the structure," "from naturally straight" and "to curly" are both superimposed on the screen and spoken by the announcer.

Holding up and curling a straw, the model tells the audience: "Everyone knows that when you try to bend an old-fashion drinking straw it will break, but this modern straw has been changed!! . . . in structure . . . so that it curls naturally . . . and stays curly!'

The girl also is pictured while taking out the last pin curl and combing out her hair with the curls bouncing into place. Meanwhile, the announcer claims: "This is how Natural Wave Works: It penetrates through the hair, changing the *structure* of *each* individual hair . . . Giving you a *natural* curl . . ."

Alleging this is misrepresentation which violates the FTC Act, the complaint charged that "Natural Wave" will change neither the structure of the hair nor change naturally straight to naturally curly hair.

The company is granted 30 days in which to file answer to the complaint. A hearing is scheduled December 18 in Washington, D. C., before an FTC hearing examiner.

•

George Barr Honored

George Barr, president of G. Barr & Co., Chicago custom filler, has been reappointed chairman of the Illinois Governor's Committee on Employment of the Physically Handicapped. This will be Mr. Barr's eighth consecutive year in the position. The committee develops employment opportunities for handicapped workers.

•

Hazel Bishop Names Ochs

Edward A. Ochs, former general sales manager, has been named vice-president of Hazel Bishop, Inc., New York.

Bobst Honored at Dinner

Elmer H. Bobst, chairman of the board of the Warner-Lambert Pharmaceutical Co., was the guest of honor at a luncheon at New York's Manhattan Club given by Percy C. Magnus, president of Magnus, Mabee & Reynard, New York, to a group of leaders of the essential oil industry on Oct. 14.

Mr. Bobst, who is also chairman of the development program of the Columbia University College of Pharmacy, told the group that the pharmacist must take his place as a member of the health team and that the Columbia University College of Pharmacy is developing an academic and research program that will be of great benefit both to the profession and the pharmaceutical industry, and to the public as well.

Leo Roon, chairman of the board of trustees of the College of Pharmacy, spoke of the new Bobst-Columbia Plan for Pharmaceutical Education, recently developed at the College.

Crown Names Regional Mgrs.

Crown Cork & Seal Co., Philadelphia, has named George P. O'Brien manager of can sales and Mark T. Concannon manager of closure sales for the Middle Atlantic Region. Both will be based at the company's Philadelphia office, and will work with district sales managers and sales representatives.

Concannon

O'Brien

Mr. O'Brien joined Crown as a sales representative in 1947, and since then has served as assistant district sales manager, district sales manager, and consolidated district sales manager of the Philadelphia area. He is a member of the Philadelphia Paint, Lacquer, and Varnish Association.

Mr. Concannon was affiliated with Canada Dry from 1933 to 1943, first as Pittsburgh sales manager, and then as product control and sales specialist in the firm's headquarters. Later he served as a manufacturers representative, and joined Crown on August 1, 1958 to work on special sales assignments with the beverage and brewing industries.

•

New Machinery Producer

A new company has been organized in England to manufacture production and research aerosol filling machinery. Called Aerofill, Ltd., it is located at Walmgate Road, Perivale, Greenford, Middlesex, and is associated with Churchill Instrument Co., Ltd., builder of special purpose machines and laboratory equipment.

The new company has taken over the pressure filling business of I. F. Eyles (Refrigeration) Ltd. and will manufacture fillers designed by I. F. Eyles. Cold filling units will continue to be made in conjunction with the Eyles company,

Chairman of the new company is D. H. de Trafford, and the board of directors consists of D. Asdell, R.V.G. Elwes, and H. D. Fanshawe.

Aerofill's equipment will be designed on a unit construction system so that an installation can be increased in size and volume as needed. Also, laboratory and small-run equipment may be incorporated into major filling lines. Nitrogen fillers and shaker-gassers, as well as burette fillers, pressure testers, compatibility test cells, test ovens, can crimpers, and bottle spinners, will also be manufactured and sold by Aerofill.

The company has no connection with Aer-O-Fil Engineering Corp., American equipment supplier.

•

Santamaria Joins Revlon

Revlon, Inc., New York, has announced the appointment of Louis E. Santamaria as executive vice-president and general manager of the company's international subsidiary, Revlon International Corp. He joins Revlon after 12 years' association with Johnson & Johnson, where he was vice-president and director of Johnson & Johnson International.

APPLY MORE THAN
100 AEROSOL VALVES PER MINUTE
WITH THE CAPEM H-O-FV

If applying aerosol valves is a bottleneck in your packaging operation, here is your solution—the CAPEM H-O-FV.

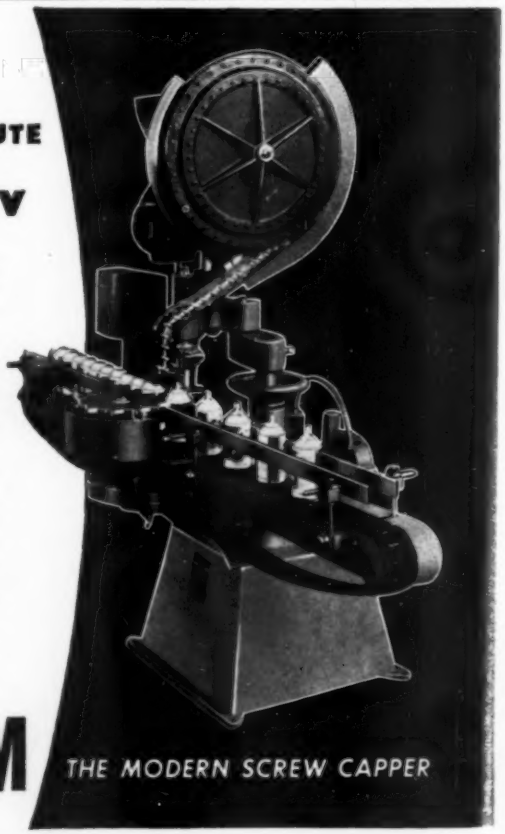
Rich Products Corp., Buffalo, N. Y., manufacturers and distributors of Rich's "Whip Topping", recently installed one of these machines. Production has increased and results have been most satisfactory since installing the H-O-FV on their aerosol container line.

The Model H-O-FV sorts and applies aerosol valves to whipped cream containers at speeds in excess of 100 per minute. Stainless steel and chrome-plated parts are used whenever necessary to comply with dairy industry regulations. Electric switch gear is mounted conveniently above conveyor to facilitate washing the line at shut-down time.

Changeover from one container size to another is simple and easy.

For complete information on the CAPEM H-O-FV and other Consolidated packaging machinery, write Sales Manager, Consolidated Packaging Machinery Corp., 1400 West Avenue, Buffalo 13, N. Y.

CAPEM



THE MODERN SCREW CAPPER

Thomasson of Pa. Formally Opens Huge New Aerosol Filling Plant at Norristown

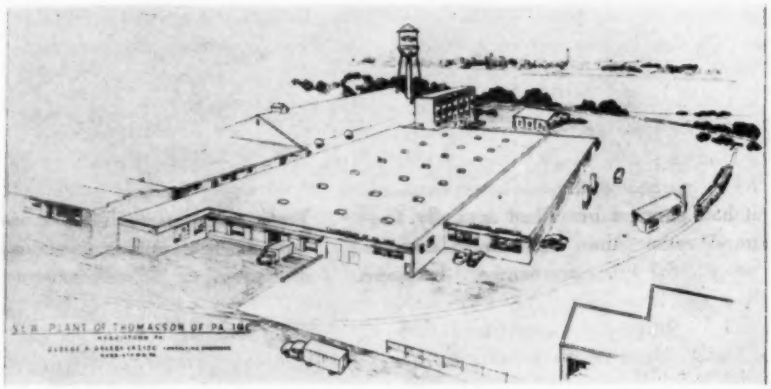
THOMASSON of Pa., Inc., late last month announced the opening of its new plant, at Norristown, Pa., said to be one of the largest, most up-to-date aerosol custom loading plants in the U. S.

After a disastrous fire in August, 1957, the Thomasson management, faced with having to find an existing plant elsewhere, or work in temporary quarters until a new plant was constructed, after much deliberation and looking around, decided to build on the old plant site in Norristown. But instead of moving machinery into a plant built for something else, the new plant was to be designed and built to the plans of Thomasson engineers, incorporating the most efficient aerosol loading techniques and the latest in safety precautions.

Thomasson's new plant has four separate aerosol production departments, fully equipped to specialize in the specific aerosol fields of cosmetics (i.e., colognes, shaving creams, hair sprays); pharmaceuticals; household specialties (insecticides, animal sprays, room deodorants, window sprays): and, the fast-growing spray paint and protective coating field and industrial products. Each production area has its own sprinkler system, with fire walls and doors between departments. All electrical equipment is explosion-proof. Special ventilation equipment has been installed for further safety precaution.

Thomasson's new liquid materials tank farm is reported to be the largest and most scientifically equipped in the aerosol field. Another feature is the battery of pre-mix tanks. Through this procedure the various components of the formulations are properly and minutely blended and then pumped into the custom-loading department for packaging.

Another mixing plant is maintained as a separate unit, apart from the loading plant, where materials and special formulations are pre-mixed. The warehouse area is so planned and arranged that customer products may be stored and processed for complete or drop shipment. Truck tailgate



loading facilities provide convenience and fast service.

Thomasson's research laboratories are equipped to do everything from devising formulas for new products to adapting existing products to spray usage. Donald O'Brien, who recently joined Thomasson after eight years as product development chemist and aerosol products specialist for the Colgate-Palmolive Co., is in charge of Household Products. The protective coatings laboratory division is headed by Gus Loehr, widely known in this field. The laboratory contains the latest scientific equipment for formula application and product development. Each product must have its own formula detailed, and Thomasson's quality control includes 136 separate check points.

All told, Thomasson's new aerosol facilities include over 70,000 square feet of floor space, with acres of surrounding space for anticipated future growth.

"With the finest, most modern aerosol loading techniques, equipment and facilities," says James W. Bampton, president of Thomasson, "we're ready to move forward as we confidently face the future. We suffered a serious setback, but it spurred our efforts to achieve this new and splendid facility."

According to David R. Bagenstose, vice-president and general manager, the company can offer a responsible prospect facilities for packaging from 10 or 20 cans for pilot tests, up to several hundred thousand on a production basis.

Stauffer Forms Drug Co.

Stauffer Chemical Co., New York, last month announced its first venture into the pharmaceutical field. The chemical firm, along with E. Merck, A. G. (Darmstadt, Germany) has jointly formed a new firm for the manufacture of bulk quantities of several pharmaceuticals and fine chemicals of the E. Merck line. The new firm, which will be known as Stauffer Pharmaceuticals, will be headed by F. W. MacMullen, former assistant manager of market research for Stauffer.

•

CSMA Honors E. G. Klarmann

Dr. Emil G. Klarmann, former president of the CSMA and vice-president of technical service of Lehn & Fink Products Corp., New York, has been awarded the 1958 Achievement Award of the Chemical Specialties Manufacturers Association. The award was established in 1952 to honor those who have made outstanding contributions in the field of chemical specialties.

•

New Essential Oils Firm

Pierre Coutin, former president of Ph. Chaleyer, Inc., New York, has formed a new essential oils firm at 219 E. 60th Street, New York 22. It will be known as Pierre Coutin Associates.

•

Bennett Bon Ami Director

Edmund D. Bennett, president of Fluid Chemical Co., Newark, N. J., has been elected to the board of directors of Bon Ami Co., New York.

Denies FTC Restraint Charge

American Cyanamid Co., New York, filed an answer last month to the charge by the Federal Trade Commission that patent licensing agreements between Cyanamid and other drug firms had restricted competition in the marketing of antibiotics. Cyanamid stated in its reply to the FTC charges that patent agreements it had entered into had actually fostered rather than restrained competition, for an agreement between Cyanamid and Chas. Pfizer & Co. had enabled Pfizer to manufacture and sell tetracycline from chlortetracycline which was covered by a Cyanamid patent. The agreement also made it possible for Cyanamid to continue to manufacture and sell tetracycline under Pfizer's patent.

•

Pew of Linde Dies

Paul B. Pew, executive vice-president of the Linde Air Products Division of the Union Carbide Corp., New York, died early last month. He had joined the company, a major producer of nitrogen for the aerosol industry, in 1923; and at the time of his death was in charge of Linde's sales, production, and research activities.

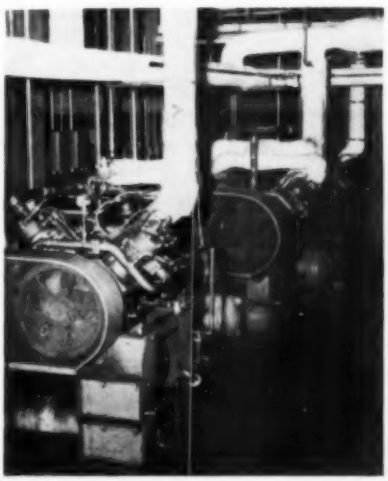
AEROSOL Executives

know that

MONSEN
Refrigeration

custom installations

are Superior



SINGLE & TWO STAGE EQUIPMENT as installed for COLD FILL PRODUCTION LINES.

This equipment is capable of chilling enough propellant to —40°f and concentrate to —15° to fill 140 8 oz. cans a minute.

—Write or call for further information—

MONSEN
REFRIGERATION

228 Montgomery Street
Bloomfield, New Jersey
Pilgrim 3-0634

Carbide Appoints Geary

Daniel C. Geary has been appointed to the Aerosol Technical Service Laboratory for "Ucon" propellants, according to an announcement from Union Carbide Chemicals Co., Division of Union Carbide Corp., New York.

Carbide is currently staffing its organization to market "Ucon" fluorocarbons, which will be produced this fall at a new 50-million-pounds-per-year unit at Institute, West Virgina.

In his new position, Mr. Geary will be engaged in research and development work on the many aspects of aerosol pressure packaging. Prior to his appointment, he served with Revlon, Inc., as a senior chemist in the company's aerosol section, and prior to that for General Chemical Division of Allied Chemical Corp. as a technical service representative for aerosol propellants.

A holder of a B.A. degree in chemistry Mr. Geary was graduated from Hope College, Holland, Michigan, and also attended Fairleigh Dickinson University for three years, taking courses in chemistry and chemical engineering. Mr. Geary is a member of the CSMA; the Society of Cosmetic Chemists; and the American Chemical Society.

•

ConCan Realigns Execs

Continental Can Co., New York, has announced a number of reassignments among its leading executive personnel. Lawrence Wilkinson, excutive vice-president of the glass and plastic operations group, was named executive vice-president in charge of finance and administration. To succeed him in the glass and plastics operations post, William M. Cameron, former vice-president in charge of the Central Metal Division, was named.

Charles B. Staffacher, financial vice-president, was appointed executive vice-president of the Robert Gair Products Group, succeeding Norman F. Greenway, who will retire Jan. 1. E. L. Hazard, former director of staff of the metal operations group, was appointed vice-president of the Central Metal Division.

•

Wallerstein to England

Wallerstein Co., New York producer of antibiotics and pharmaceuticals, has acquired control of Wheeler & Huisking, Ltd., London importer of crude oils, drugs, spices, essential oils, and other chemicals.

FTC Cites Judson-Dunaway

The Federal Trade Commission recently ordered Judson Dunaway, Dover, N. H., aerosol marketer, to stop making exclusive dealing agreements with its customers and discriminating among them in the granting of promotional allowances. The firm manufactures and markets "Expello" and "Bug-a-Boo" aerosol insecticides.

The FTC adopted an initial decision by Hearing Examiner John Lewis which contained an order agreed to by the corporation and by counsel for the commission's Bureau of Litigation. The commission's original complaint was issued Oct. 31, 1957.

According to the complaint, Judson Dunaway paid substantial sums to Grand Union Corp., a large supermarket chain with headquarters at East Paterson, N. J., to have its products advertised on the chain's animated sign just above Times Square in New York. The complaint charged that these payments, which also covered in-store promotional displays in Grand Union's retail outlets, were not made available to the chain's competitors on proportionately equal terms, as required by the Robinson-Patman Amendment to the Clayton Act.

Judson Dunaway was also charged with having made sales to some customers at discounts from the regular prices, on condition that the favored customers not deal in similar products made by competitors. The agreement is for settlement purposes only and does not constitute an admission by the company that it violated the law.

Judson Dunaway was recently acquired by the Drackett Co. of Cincinnati, marketers of "Windex."

•

Hazel Bishop Names Three

Hazel Bishop, Inc., New York aerosol marketer, has announced three appointments in its regional sales divisions. John M. Dunnt, Jr., former district sales manager for Personal Products Corp., was named sales manager for Bishop's eastern division. New sales manager for the company's southwest division is John McKenzie, Jr., who had been general sales manager for Central Beauty Products; and Leonard J. Bertolli, Jr., formerly with Hudnut Sales Co., was appointed sales manager for the central division.

•

Durrer Returns from Europe

E. R. Durrer, president of The Givaudan Corp. and its associate companies, Givaudan-Delawanna, Inc., Givaudan Flavors, Inc. and Sindar Corp., New York has returned from an extended European trip during which he visited the Givaudan plants in Switzerland, France and England. Commenting on the economic conditions existing in the countries he visited, Mr. Durrer said that the recession experienced in the United States had no disturbing repercussions in Europe and business abroad appeared to maintain a high level of activity.

•

Pond's Buys Vick's Line

Chesebrough-Pond's, Inc., New York, recently acquired all the cosmetic interests of Vick Chemical Co., New York, including that company's wholly-owned subsidiary, Prince Matchabelli. According to J. A. Straka, Chesebrough-Pond's president, the acquisition will give his company "diversified volume and a stronger potential in the department and drug store fields."

Included in the Vick line are "Matchabelli" and "Simonetta" perfumes and cosmetics, "Seaforth" and "Black Watch," toiletries for men, and "Sofskin" hand creams.

The amount of cash involved in the transaction was not announced.

•

Kolar Laboratories Expands

Kolar Laboratories, Inc., 1123 W. Jackson Blvd., Chicago, has recently purchased two new buildings with a combined total floor space of 137,000 square feet to expand its operations in the manufacture of private brand cosmetics and toiletries. Founded in 1910 by Gustav S. Kolar, now chairman of the board, Kolar Laboratories manufactures and packs more than 500 products under private label. Cosmetic development laboratories develop and perfect new formulas for clients.

Prentiss Names Sales Rep.

R. Peltz Co., Philadelphia, has been appointed exclusive sales representative for Prentiss Drug & Chemical Co., New York, in the Philadelphia, Baltimore, and Washington area. Prentiss is a manufacturer of insecticides and room deodorant ingredients for the aerosol industry.

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LEGAL NOTICE

Statement of ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233).

Of Aerosol Age, published monthly at New York, New York, for November 1, 1958.

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5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, triweekly newspapers only.)

Signed—Donald A. Davis, Editor

Sworn to and subscribed before me this 16th day of October, 1958

(Seal) David R. Tryon

(My commission expires April 12, 1959)

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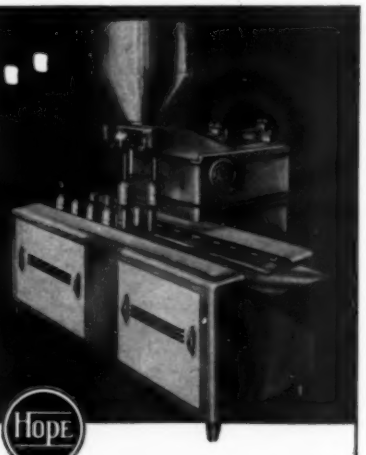

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Equipment—Processes—Bulletins—

New Aerosol Stem Casing

The Karl Kiefer Machine Co., Cincinnati, announce the perfecting of a new stem casing which pressure fills to an exact limit into any type of container without the use of a seal. The split second cut-off of the flow is accomplished through the rapid action of a vacuum liquid level control, when it reaches the pre-determined height.

The new casing is said to be ideal on plastic bottles which are often deformed by the sealing compression formerly necessary. It is equally good when used for sanitary cans, regular and wide mouth bottles, also jars of all types and capacities.

•

Timed Insecticide Unit

Huntington Laboratories, Inc., Huntington, Ind., has introduced a timed automatic dispenser for use with a metered insecticide aerosol can. It consists of a wall-mounted dispenser equipped with a timing device which automatically activates the valve of a 12-ounce aerosol container at 15 minute intervals. Each can contains about 3300 sprays, enough to operate the unit 34 days on a 24-hour basis. The system is called the "Done Died", and reportedly has been passed by the USDA for use in the presence of food.

•

New Thickening Agent

"Carbopol," a new thickening agent that is said to have remarkable suspending, dispersing, and emulsifying properties, has been introduced by the B. F. Goodrich Chemical Co., Cleveland. The new material is a water-soluble polymer which will, according to Goodrich, make toothpaste, creams, and lotions smoother and at the same time eliminate drying and caking. The powder can also be used in polishes, inks, waxes, and waterproof and oilproof coatings. It is said to be nontoxic, and is being made at Goodrich's plant at Calvert City, Ky.

•

Emergency Oxygen Source

A pressure-packed container of pure oxygen for use as an emergency source of oxygen for cardiac condi-

tions, gas poisoning and in accidents, is being marketed under the name "Lif-O-Gen" by Lif-O-Gen, Inc., 226 S. 6th St., Philadelphia. Principal in the company is Daniel H. Gattone who holds U. S. Patent No. 2,788,784 on the new product, which will be marketed through retail drug stores at $4.95.

The product was demonstrated for the first time at the recent Philadelphia convention of the National Association of Retail Druggists. It supplies a continuous flow of oxygen for ten minutes, or if it is used only for inhalation, with the valve being closed during exhalation, there is approximately a twenty minute supply.

There is need for an emergency supply of oxygen in cases of drowning, electrical shock, suffocation, etc. The device may also be used to counteract the symptoms of migraine headaches, fainting, motion sickness, and, yes—hangover.

•

Tallahassee Booklet

A booklet showing the advantages of establishing a chemical specialties plant in Tallahassee, Fla., has been prepared by the city's chamber of commerce. It points out that manufacture of aerosols, automotive chemicals, and other household products is trending toward a pattern of regional branch plants, and claims that savings of up to $143,000 per year can be realized on lower employee costs and reduced product transportation costs.

•

New Reynolds Brochure

Reynolds Ink, Inc., has just issued an attractive brochure printed in four colors describing its various aerosol products. Some of the products described in this piece of literature are "Reynolds Stencil Inks," available in nine colors, "Layout Ink," "Stencil-Kover," (a tan colored obliterating fluid), "Sherolite," a waterproofer, "Penetrol," a rust preventative and "Colloidal Graphite," a lubricant. All products are packaged in spray cans. The brochure, which is illustrated with a number of photographs showing typical applications, is available from Reynolds Ink, Inc., 4500 Euclid Avenue, Cleveland 3, Ohio.

•

New Type of Nylon

A new type of nylon molding material has been introduced by Foster Grant Co., Manchester, N. H. Called "Fosta Nylon 62 ASK," the material is being produced under license agreement with Farbenfabriken Bayer, German chemical firm.

It is described as being "highly homogeneous" and is said to eliminate mold release problems. Nylon is a principal material in the fabrication of all-plastic aerosol containers.

•

Chromatograph Integrator

A gas chromatograph integrator that automatically records on a strip chart up to 12,000 counts per minute per inch of chart has been announced by the Disc Instrument Co., 12671 Bubbling Well Road, Santa Ana, Calif. The unit is easy to read and features a new miniature integrator, accurate to 0.1% full scale.

For long life, the unit's mechanism is run immersed in oil. Gas chromatographs are used in the aerosol industry for product analysis.

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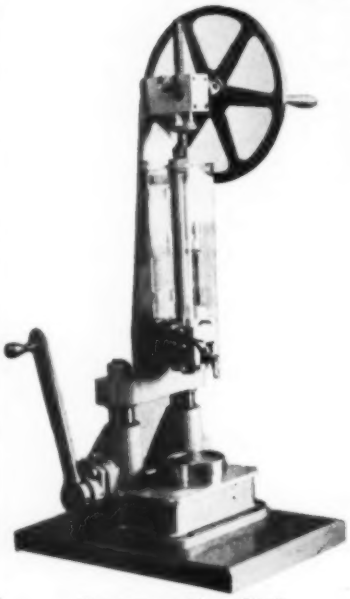

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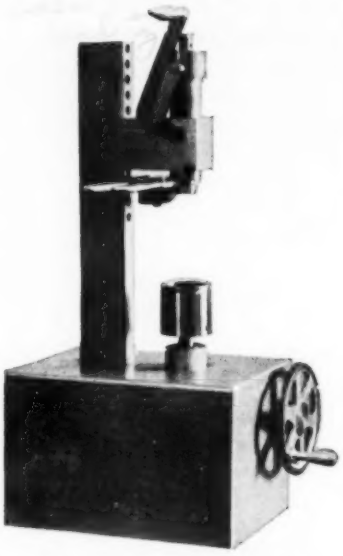

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New Aerosol Tilt Valve

A new, non-metallic aerosol tilt valve for food and non-food products has been designed by Aerated Container Corp., 39 South La Salle Street, Chicago.

Unique features of the new valve include a spring-diaphragm incorporating a limit lock (patent pending) which guarantees uniform preloading, plus quick acting "shut-off," and a specially designed valve seat which assures a leakproof seal and provides an easily controlled product-flow for accurate upside-down dispensing directly where required. A tamper proof, sanitary cap is available in a variety of colors. The new valve, according to Aerated's president, Daniel Michel, is the result of years of controlled research and testing.

Both plain or decorator valve types are said to provide excellent dispensing for pressure packaged foods such as toppings, syrups, salad dressings, spreads, catsups, mustards, and such non-food items as shaving creams, shampoos, hand lotions, waxes and polishes.

Aerated Container, in addition to selling valves, caps and a line of processing equipment, provides facilities for customers to use in developing and testing consumer products. The company is the originator of Dairy Whipt valves and has pioneered many aerosol developments since 1946.

Do It Yourself

(*From Page* 17)

with no purchase carry-over whatsoever.

Now that the disadvantages of "doing-it-yourself" are out of the way, we can get to the more important advantages.

Advantage No. 1—Quality Control

Complete quality control by the pharmaceutical firm is possible at every step of production. This is more in the nature of a reassurance for many types of aerosol products, rather than a pressing need. However, as more and more true pharmaceuticals are pressure packaged, the detailed, continuous and documented record of quality factors from start to finish by knowledgeable pharmaceutical plant personnel will become not only desirable, but vital if the high standards of the pharmaceutical industry are to be maintained. Of all the advantages of "doing-it-yourself" this one is probably paramount (in the estimation of the pharmaceutical industry).

Advantage No. 2—Efficient Utlilization of Personnel.

One of the major advantages of aerosol filling on your own premises may be the use of personnel otherwise not productively employed at all times. This can be especially important if an organization is small and subject to relatively great fluctuations in production. Usually an attempt is made to maintain a labor force intact despite production variations, and the more facilities that can be added to take care of otherwise slow periods, the better. In a number of instances of my own knowledge, aerosol loading has been undertaken by companies, and their entire production requirement met, without adding a cent to the payroll. This, of course, can lead to a certain amount of bookkeeping confusion since from one standpoint the labor cost of the aerosols has been nothing, while from the cost accounting viewpoint, it is entirely possible that the labor costs allocated to aerosols exceed the cost of having the job done outside. The only true criterion here must be the influence of the aerosol activity on overall profits. With this in mind, the advisability of "doing-it-yourself" in such a case is self-evident.

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Advantage No. 3—Confidentiality.

Formulas, processes and techniques for aerosol products can be kept confidential on precisely the same basis as for all the other products made by the pharmaceutical manufacturer. In addition to actual know-how factors, the number of people who even know about the imminent advent of a new aerosol product will be held to a minimum and all those will be actual employees of the company. Developmental contributions by production personnel and information collateral to development will be held fully within the compnay structure.

Advantage No. 4—More Flexible Inventory Control.

Within your own walls it is possible, and frequently entirely practical, to change products in the middle of the day, or to run for half a day and then shut down, thus gearing production to demand in a way totally impractical if production is being handled by an outside contractor. Also scheduling of production must take into consideration only your own requirements, rather than the demands of a number of other customers, all of whom have as much right to their production on a certain day as you do. In addition, since production can be closely geared to requirements, there is less need for large, long term inventories with their consequent trapping of capital. This aspect of inventory control can have quality as well as fiscal overtones in cases where products have a limited shelf-life or may be unduly sensitive to extremes of temperature encountered in long term storage.

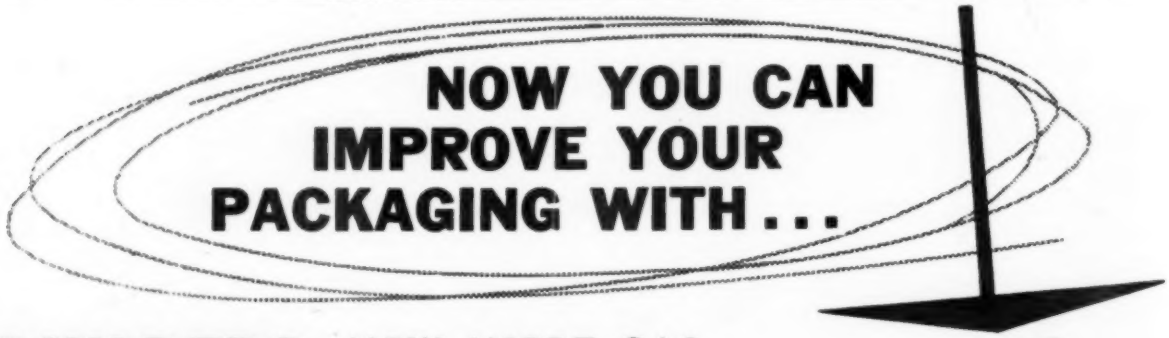
Advantage No. 5—Complete Liaison Between Production and Research Personnel At All Times.

With your own filling plant in operation, all research personnel can be completely conversant with the characteristics and potential of the equipment to an extent otherwise impossible. This means that processes and procedures can be outlined by the research staff to take full advantage of the equipment.

In the other direction, plant personnel can discuss details of their processing and check on production instructions with no time lag and with utmost effectiveness. In the long run, this factor is bound to result in higher quality and less waste, since there will be a minimum tendency to carry on a questionable operation without checking it with the people concerned.

Advantage No. 6—More efficient Shipping and Handling.

Ordinarily, when a pharmaceutical product is to be filled by a contract loader, the active material must be prepared at the pharmaceutical plant, then shipped to the loader who fills the aerosol containers. Now for most aerosols the loader can warehouse the finished products and drop ship to his customers' orders. Frequently for pharmaceuticals this handling is not desired and the finished products are shipped back to the customer warehouse. A little scrutiny will show that all this extraneous shipping can be eliminated if production is carried on at the pharmaceutical plant with its normally adjacent warehouse.



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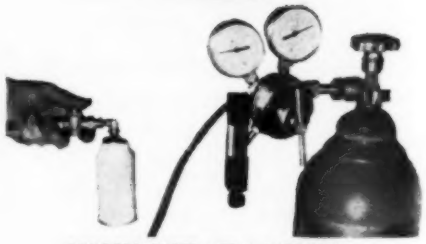
- Permits Uniform Gassing
- Production Rate of approximately 10 per minute.

3 Easy Steps to Better Filling:

1) Fill your Product
2) Cap Can
3) Pressurize



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There are some general considerations, as well as the specific advantages or disadvantages that must be taken into account in reaching a decision to go into "do-it-yourself" aerosol filling.

Equipment is usually the primary concern of anyone contemplating aerosol packaging. It can vary from little more than laboratory capacity units to fully automatic equipment handling several hundred units per minute. Production equipment, relying more on labor than on mechanical refinement, is available at a minimum price. Other equipment, naturally much higher in price, is nearly the last word in automatic operation. Just which is best in a given case, depends entirely on circumstances.

It might be entirely sensible for a large, wealthy company to put in the high labor, low price equipment if it has adequate labor relatively free for the purpose. On the other hand, a small, moderately prosperous company, with a low labor availability might be well advised to put in much more automatic equipment (and expensive) equipment.

Capital investment will run from a practical minimum in the neighborhood of $20,000 to several hundred thousand, depending on the degree of refinement and output capacity.

A slight exception to these figures might apply for very light production, i.e. less than 200,000 small units per year. In all likelihood, this could be accomplished with various pieces of laboratory type equipment without undue disadvantage. In this case the investment could probably be held to less than $5000.

Space requirements for aerosol filling *per se* are not great, 800 to 1000 square feet would be about minimum for the production area, and in the case of some of the newer, more compact equipment, this could be adequate for production in excess of one hundred packages per minute. The greatest space requirement is for storage of containers, valves, cartons, etc., but since this is true for products other than aerosols, as well, it cannot be considered incident to them alone.

Propellant storage and handling can be a major problem. Liquefied gases can be handled in 2000-pound cylinders, tank trucks, or railroad tank cars. The last two ordinarily require permanent storage tanks on your premises into which they can be emptied. Considerable money may be involved in any case, as the cylinders require deposits and handling equipment, and the storage tanks and their attendant piping and pumps are costly.

Nitrogen handling, of course, is comparatively inexpensive and does not require quite the complex equipment that is necessary for the liquefied gases.

At this point the question of pressure filling versus cold filling is usually injected and a word concerning the two methods may not be amiss. This, of course, applies only to the liquefied gas propelled products, not to those gassed with nitrogen or other compressed or soluble gas.

The liquefied gases, which may make up as much as ninety-five percent of the total container contents, must be filled as liquids. There are two conditions under which they can exist as liquids. One — at pressures greater than their vapor pressure or Two — at temperatures below their boiling point.

The mechanics of filling are not greatly different — in each case the active material may be filled first either as a liquid, a plug of solid material, or a powder. In pressure filling, the closure is applied after eliminating the air from the container. Next, a metered charge of liquefied propellant is forced into the container through the dispensing valve and the package is ready for testing, application of the button and cover cap, and cartoning.

In the cold fill operation, propellant chilled to below its boiling point is filled into the open top of the container, as a liquid. The closure is applied and from there on the package is handled the same as the pressure filled package.

I prefer pressure filling as a general thing since theoretically it is absurd to chill the container contents through a 90° or a 100° temperature

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QUALITY CONTROLLED—Every shipment laboratory tested for crack resistance

- Ideal for aerosols, atomizers, squeeze bottles and lotion pumps
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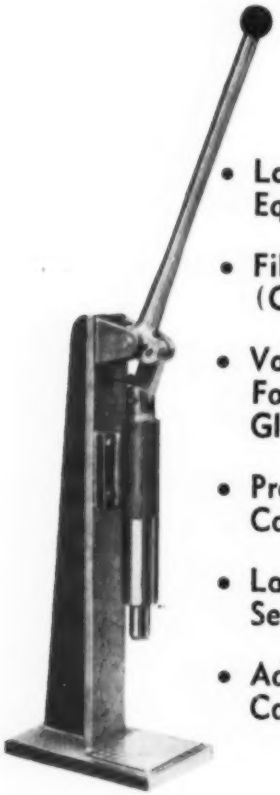

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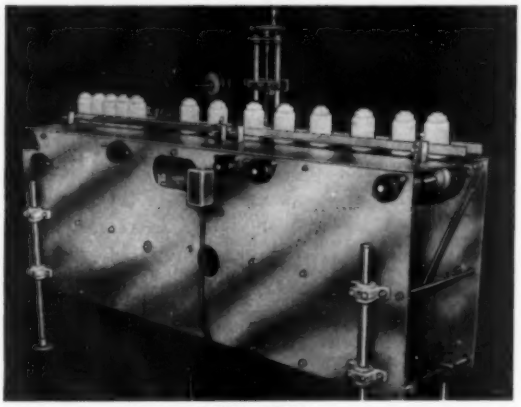

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drop, using energy to do the chilling and then turn right around and use more enargy to heat it up immediately. However, until very recently, cold fill equipment, absurd or not, made the most sense, if I can phrase a paradox.

From an operating cost standpoint, the advantage lies all with pressure filling for a given output. Personnel requirements are the same for both methods for the same production, and power consumption is probably less than half that required for refrigerated filling.

It might be well to inject a word here on personnel requirements of the operation. Generally, regardless of equipment refinement, six people, usually girls, are the minimum with which a line can run. These same six girls may be able to handle two or three times the minimum practical output of the equipment. Higher speed automatic equipment rather uniformly requires more people serving the machine, but fewer per unit produced, since infeed and outfeed must be handled manually to a great extent and larger numbers of packages going through require more people at each end of the machine.

There are a number of aspects to aerosols that we cannot explore here today, but there is at least one legal consideration that should be emphasized in connection with a "do-it-yourself" program. This is the matter of Interstate Commerce Commission Regulations. Where, and as they apply, they empower the Commission to enter your plant and check on your manufacturing procedure. As rare as this occurrence has been in the industry, the fact of this regulatory power should be recognized.

In passing, it might be well to mention some of the other agencies or regulatory interest, such as the U. S. Department of Agriculture, The Food and Drug Administration, Post Office Department, and the local Fire Department.

I trust I will not be presumptuous if I offer you all the services of the major container companies, the propellant manufacturers, the valve manufacturers, and many raw material suppliers, in getting under way with your "do-it-yourself" aerosol plans. They all stand ready to help to a most generous degree. It is safe to say that it has been only through their past help that the industry has grown to its present stature — that help will continue.

In addition, the Chemical Specialties Manufacturers Association has been the rallying point for most of the aerosol interest in the last ten years, and has a number of pertinent publications available.

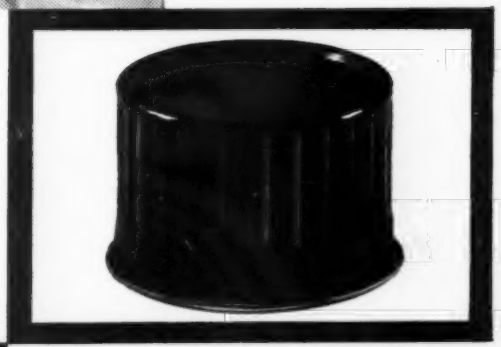
I am sure I speak for the whole aerosol industry when I extend a cordial invitation to you in the pharmaceutical industry who have not heretofore considered it, to join us in this functional, modern, and profitable approach to packaging.★

Cost Substantiation

(*From Page* 16)

temic treatment of certain diseases which could very conceivably be adapted to an aerosol package with excellent therapeutic effects. For instance, tetracycline in drops, syrup, and capsule form, is a useful drug in the prophylaxis and amelioration of asthmatic bronchitis associated with infection in susceptible children. Side effects were not frequent nor serious in a series of 25 patients, only one of whom failed to benefit to some degree. Asthmatic bronchitis attacks were reduced from 134 on placebo therapy to 50 during administration of the antibiotic. It would appear that tetracycline in an aerosol package with a metered delivery merits investigation for the prophylaxis and amelioration of asthmatic bronchitis. At this point it should be mentioned that the nation's drug stores are finding a new lift in prescription sales. Some druggists are so enchanted by rising drug sales that they are actually kicking out the long-time earmark of the corner drug store—the soda fountain —to make room for more pills and powders. The reason is not hard to find. Prescription sales last year totaled $1 billion, nearly four times

best dressed aerosols are wearing...



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the total for as recent a year as 1947. Additional gains appear quite certain.

I should like to emphasize that the aerosol inhalation therapy products represent an entirely new frontier in the treatment of disease and can be likened to the frontiers established by the introduction of the hypodermic syringe. Low order particle size medicaments for inhalation therapy can be achieved on a practical basis only in aerosols.

Aerosolized medicaments currently on the market include epinephrine bitartrate, isoproteranol and a combination corticosteroid, antibiotic, antihistamine preparation.

Aerosol Units for Treatment Via the Oral Route

Aerosolized versions of various products, such as cough mixtures and vitamins, have a tremendous future potential. The inherent disadvantages of administering cough mixtures or other syrupy liquids from a bottle are the inevitable drip over the threads of the bottle, resulting in crystallizing of the solids and freezing of the cap; tackiness of the bottle after usage; normal breaking hazards associated with glass bottles; and the difficulty of transferring the liquid to a teaspoon. With a cough mixture or other similar fluids packaged in a pressurized container under an inert atmosphere of nitrogen with a suitable dispensing spout, the elements of sloppiness, tackiness and difficulty of transfer are completely eliminated.

In this regard an extremely exciting development which promises to be a great stimulant to all types of aerosol packaging is to be found in the metered valve principle described by Urlaub in his patent #2,778,543. This patent involves the use of a floating ball check valve in the dip tube and can be regulated to meter volumes from fractions of a cc. to well over an ounce. Figures 4, 5, 6 and 7 indicate the operation of the floating ball metered valve. This particular concept is applicable to products both under inert atomospheres and liquefied propellant systems. The packaging of cough mixtures, vitamins and nasal sprays under nitrogen is imminent with metered dispensing.

In the vitamin field the sales of liquids, emulsions and syrups amount to $85,090,000. In terms of numbers of units, if we assume that the average selling price for the liquid multivitamin preparations is $2, this would yield a market of 42 million units. The clock in the Census Bureau ticks off the rate of population increase and the hands recently pointed to 173 million people. The increase runs at the rate of three million annually, which is equivalent to adding a new state the size of Minnesota or Tennessee every year. Every 15 minutes enough babies are born to fill a school room. The increasing pediatric market has led several merchandisers to evaluate pediatric multivitamin drops in an areosol plastic coated bottle dispensed with a 0.6 cc. metered does. The advantages of the aerosol vitamin package are several.

1. The bulk remains under an inert atmosphere of nitrogen throughout the life of the product.
2. The stability of the vitamins is superior to ordinary glass packaging.
3. The increased cost of the package can be compensated to some extent by the decreased overages in the vitamins.
4. The possibility of contaminating the bulk as exists in glass bottles when the dropper is transferred from the infant's mouth (with organic contamination) back to the bottle is eliminated in the aerosol package.
5. Accurate metering is obtained in the aerosol package.

Dental Products

The following is a list of various dental preparations which have either appeared on the market or are currently under investigation in aerosol packages:

local anesthetics
anodynes
toothpaste
astringents
anti-bacterials
oral prophylaxis
breath sweeteners
stain removers
tooth polishers

Of course, the most dramatic pressurized product in 1957 was pressurized toothpaste. I shall digress somewhat from the medicinal and pharmaceutical areas, since toothpaste represents the first nonfood aerosol packaged commercially using nitrogen as the propellant. Pressurized toothpaste is of unique interest and warrants an exposition that should be of value to a wide variety of products. Its advantages lie in the streamlined method of dispensing which is particularly acceptable to the younger children. No longer will the youngster be admonished for sqeezing the tube in the middle, no longer are we frustrated by the loss of the closure for the collapsible tube, no longer does the dentrifice extrude from the crimp end, and, of course, the medicine cabinet is no longer messy with toothpaste. From an advertising point of view the splendid copy and advertising which appear on a collapsible tube is rolled up with the tube or distorted beyond legibility when used.

In spite of all of the advantages of toothpaste in a pressurized container, however, the current situation is that of the re-education of the consumer to this means of dispensing toothpaste. There is no question in the minds of the manufacturers and distributors of toothpaste that the pressurized form of dispensing their product will eventually achieve at least 25% of the market potential, which in 1957 amounted to $210,280,000 for toothpaste.

Miscellaneous

In the miscellaneous category there are products currently under investigation for rectal and vaginal use. These investigations involve the metered dose contraceptives and anti-infectants for vaginal use, and local anesthetics and anti-pruritic astringents for rectal use. A stable anti-infective foam for combating monoliasis is particularly advantageous since a foam dispensed via an aerosol is completely contiguous with the mucosa of the vaginal cavity whereas conventional creams, jellies and liquids are not.

(Continued on Page 56)

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In the dream area it may be possible to administer insulin orally via inhalation; it may also be possible for certain vaccines to be absorbed through the nasal mucosa, eliminating the use of a hypodermic syringe.

The increased costs of aerosolized products are largely due to the container, valve and the propellants. It is true that the plastic coated bottles are approximately three times more costly than conventional glass bottles of an equivalent size. Cans used for aerosols are approximately twice as expensive as nonaerosol packaging media of the same size. The price of valves has been reduced approximately 500% in the last eight or ten years to the point where a conventional spray valve can be obtained for 2½ cents. To a large degree the use of a can or plastic coated bottle is a function of the compatibility of the particular product in metal cans. Where a particular can lining is unavailable to protect the product adequately from corrosive forces, it will be necessary to use a plastic coated bottle. Among the inhalation therapy products both plastic coated glass bottles and stainless steel vials are used.

The use of fluorinated hydrocarbon propellants can contribute considerably to the cost of an aerosol package, particularly if a large percentage of this type of propellant is used in the formulation. Nitrogen as a propellant contributes very little to the cost of the product — only a fraction of a penny per unit. The following table shows the price decline in valves from 1950 to 1958.

Year	Price/M
1950	$100
1951	86.
1952	79
1953 January	65
1953 December	56
1954	48
1955	42
1956	35.34*
1957	30.69*
1958	23.25*

*Volume purchase.

It is felt among those people earnestly engaged in the research, development, testing and marketing of aerosolized pharmaceuticals and medicinals that the increased costs of the aerosol package will be more than compensated for by its advantages.★

References:
1. *American Practitioner Digest of Treatment*, Vol. 9, No. 2, p. 249.
2. Aerosol Pressure Products Survey—1957, Chemical Specialties Manufacturers Association, Inc.
3. Communication from General Chemical Company, December 19, 1957.
4. *Drug Topics*, July 21, 1958.
5. *The Wall Street Journal*, July 30, 1958.

•

Colgate Appoints White

Kenneth White, former vice-president in charge of sales, advertising, and marketing for Bon Ami Co., has been appointed product manager of the Toilet Articles Division of Colgate-Palmolive Co., New York.

Plastic-Coated Glass

(*From Page* 28)

is governed by the submersion time and the temperature of the bottle. This gelated coating is then cured and cooled to give a tough, glossy, elastic film. The technical difficulties of doing this on a mass production scale are not inconsiderable:

1. There must be rigid temperature control to prevent thermal shock to the glass as the bottle is dipped into the paste.
2. There must be similar control of paste viscosity and temperature to ensure uniformity of pick-up.
3. There must be an accurate level adjustment to make certain that the bottle is dipped to the correct height.
4. There must be some system of removing all tears and drips from the base of the bottle, to give an attractive appearance and to enable the bottle to stand level after coating.

Of all these items the most important is height control, since the entire success or failure of the seal on the bottle is really dependent on the formation of plastic at the lip of the neck.

Of course, it is essential that the glass bottle be designed correctly in the first place. It should have a straight neck of at least 5 mm. between the shoulder and the top. Any dimension less than this will cause a filling-in of the concavity, due to

the high thermal capacity of the thick glass in the neck, and this will mean a bulkier coating of plastic at this point. If this happens, when the cap is finally crimped on the bottle it will not seat satisfactorily and leakage may occur.

Other important features are that the bottom of the bottle should have a minimum 2 mm. punt in the base to allow the surplus plastic to level off. Similarly all edges should have a minimum 1/8th inch radius to prevent the coating thinning at these points.

The type of metal cap crimper used should have a reasonably good 'digestion' in that it should be able to accommodate the rather wider degree of tolerances that are found on plastic coated glass bottles.

However, in a well designed plant all these difficulties can be overcome and the resultant coating not only will completely safeguard the bottle, but will gives it an attractive appearance and a pleasant feel—both of which are first-rate selling points. Also, these coatings can be indelibly printed in various colors for labeling purposes.

To date the principal demand for coated bottles has been from the perfumery trade, where it has been a tradition to use elegant, conventional glass containers. So firmly is this tradition established on the consumer level, in fact, that few women would ever consider buying an expensive perfume or cologne in a conventional tin plate container.

However, the larger and more stable potential market for plastic-coated glass containers lies undoubtedly in pharmaceuticals, as only glass can give the sterility required for medicinal products. A few of these products have been packaged in stainless steel, but the limitations to the draw obtainable with stainless steel, plus the relatively high costs, have reduced use of this material to only a few products. The number of pharmaceutical products packaged in glass aerosol containers has risen rapidly over the past few years, and this is likely to become a very substantial business.★

Hardware Show

(*From Page* 26)

showed its new "Spraypower" belt dressing product, as well as its insecticides and room deodorants.

Other aerosol exhibitors were Swift & Co. ("End-O-Pest"), Sheffield Chemicals ("Quick Spray" enamels), Faesy & Besthoff, and Miller Chemical & Fertilizer Co.

Over 40,000 buyers attended the show. In addition to coming from every state in the union, buyers were registered from 47 foreign countries, making this truly the crossroads of the hardware world. The show is held at a time when manufacturers are ready to present their new products to the trade with prices and production set for the following year.★

The Contract Filler

(*From Page* 18)

personnel, make the best machinery selection, have its product on the market, without time loss due to slow equipment delivery, set-up time, personnel training and initial production "bugs."

The contract aerosol filler may then be used as a reliable second source of supply when necessary.

Before making the decision to "do it yourself," this question of sufficient volume to be efficient is very important. Very often an analysis will prove that the fixed cost involved in doing business with a contract filler will be less than the variable incurred in installing facilities and "doing it yourself."

Let us now face the question of selecting a qualified aerosol filler. The aerosol contract filler, when engaged in loading aerosol pharmaceutical products, should and must be aware of his increased responsibilities. He should be evaluated for the proper acceptance of these new responsibilities. He must be able to demonstrate the following essential requirements.

1. Extreme filling accuracy.

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In summing up, it is our opinion that it is a very wise decision to select carefully and make use of the services of an aerosol contract filler when starting an aerosol program. The reasons are: The drug manufacturer does not have to make any capital investment in machinery until there is a reasonable assurance that it can be effectively and profitably used. In addition, he can put his product on the market without losses due to these variables: slow equipment delivery, set-up time, personnel training, initial production bugs, uncertain unit costs, time required for development of special equipment, and time consuming evaluation studies.★

Packaging Forum

(*From Page* 14)

can lining that can be applied commercially without pin holes or other weak spots.

2. A more versatile line of dispensing valves for oral, contraceptive, and other special functions.

3. A completely non-toxic halogenated hydrocarbon propellant.

4. A non-toxic hydrocarbon propellant which will not emulsify with the product.

5. Need for a practical glass container to hold 12 ounces or more at 90 psig. This, Mr. Pomerantz claimed, would solve the problem of a suitable container to hold 5 cc. and higher doses in a metered form, without having to put certain critical product types in metal containers.

LOUIS CHESKIN, director of the Color Research Institute, declared that the basic image or trade-mark automatically becomes the focal

point or key of the total company image for the consumer. "We are all greatly influenced by symbols," he declared, "and we therefore are unconsciously guided by a symbol in making choices." So important has this become, he pointed out, that the image of quality influences the consumer more than the actual quality of the product.

William Schlackman, director of packaging research of the Institute for Motivational Research, carried this theme further.

"All perception is physically the same, but is interpreted by each individual according to widely varying social, personality and cultural factors."

Because this is true, he pointed out, package research must attempt to understand both the symbolic meaning of the package and its perceptual factors. The Institute for Motivational Research believes that there are three necessary phases in the conduct of a psychological research project:

1. Motivational research must determine the major psychological appeals for the product.

2. Alternate designs based on the findings of motivational research should be tested for consumer acceptance and for market feasibility.

3. Final designs should be tested against old designs and against competitive designs. The extent to which the package fulfills the image requirements established in phase one should also be evaluated.

There must be a constant search for new techniques and methods by which the multiple problems in this field can be studied. There must also be an ever-increasing degree of understanding and cooperation in the packaging field. For to develop a really good package, it takes the combined effort of technical experts, designers, psychological researchers and marketing experts working as members of a packaging team.★

Aerosols in Review

(*From Page* 33)

sonably assured."

"Timidity stems also from another consideration, it is suggested," "neither food processors nor aerosol people—contract packagers, propellent producers, valve and container makers—wish to rush into aerosol foods if there is the slightest chance of a slip-up. It is felt that one incident of careless food pressure packaging—thousands of people disappointed or actually harmed by unsanitary or spoiled food items — could ruin the entire public acceptance of food in aerosols and set it back many years."

•

GLYCERINE is becoming increasingly important in the aerosol field, Samuel Prussin and H. R. Shepherd of Aerosol Techniques, Inc., Bridgeport, declare in an article on the subject in the October issue of *Soap and Chemical Specialties*. They suggest that the following properties of glycerine make it particularly important in the packaging and formulation of aerosol food products: Its ability to

1. Modify rheological properties

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November 13-14

1. Modify rheological properties.
2. Increase body of product.
3. Provide lubricating effects.
4. Alter the solubility of gases.
5. Increase stability of emulsions.
6. Increase solubility of flavors and colors in food products.
7. Contribute valuable preservative properties to the product.

The authors observe that glycerine is the most widely used component in achieving foam stability in shaving creams because of its power to absorb and retain moisture. "Other factors influencing its use in this product are lack of toxicity, its dermatological stability, its good color and odor. In addition, it imparts lubricity to the foam, enabling the razor to glide over the face with a minumum of friction and further imparts an emollient, smooth after-feel to the skin."

Turning to aerosol toothpastes, Messrs. Prussin and Shepherd declare that glycerine is used to achieve desirable body, to prevent the toothpaste from drying out, and to provide desired mouth feel for the product. "In a well formulated product, the non-crystallizable nature of glycerine is carried through to the finished product. The highly desirable humectancy contributed by glycerine is very important in pressurized toothpaste since drying out of the extruded paste in the dispensing nozzle reduces the flow rate or causes the valve to malfunction."

•

THE same issue of *Soap and Chemical Specialties* contains an excellent article by D. B. Whitlow, of Geigy Agricultural Chemicals, Ardsley, N. Y. on "Diazinon," Geigy's new insecticide for residual household sprays. Diazinon is actually 0,0-diethyl 1 0-(2-isopropyl - 4-methyl-6-pyrimidinyl) phosphorothioate, a colorless liquid which boils at 83 to 84°C. The technical product is pale to amber brown in color and is soluble up to 0.004. It dissolves readily in petroleum solvents and in acetone, xylene, and alcohol.

Mr. Whitlow reports that the material is particularly effective as a residual agent against houseflies, cockroaches, brown dog ticks, fleas, carpet beetles, and ants. As a suggested concentrate for aerosol packaging, he gives:

	% By Weight	Gallons
Geigy Diazinon 20S	3.62	3.16
MGK Pyrocide Intermediate	30-6	
Pyrenone or Aerosol Conc.	55	
	1.26	1.13
Deodorized Kerosene	95.12	95.71
	100.00	100.00

"Combine the concentrate with a propellant mixture suitable for delivering a coarse, residual type spray. Use 70% by weight of concentate to 30% propellant.

•

AEROSOL catsup came in for some glowing words last month by Frederick C. Othman, nationally-known columnist who writes a daily column for United Features Syndicate. In a copyrighted column that appeared in major daily newspapers all over the country during the week of Sept. 15, Mr. Othman called the invention of catsup packaged under pressure "a scientific breakthrough in the food business almost comparable to the discovery of the wheel. It'll probably change our eating habits in a hurry."

INDUSTRY CALENDAR

Nov. 12-14 — Canadian Chemical Specialties Manufacturers, 1st annual meeting, Queen Elizabeth Hotel, Montreal, Canada.

Nov. 18-20—National Conference on Air Pollution, Sheraton Park Hotel, Washington, D. C.

Nov. 20—Society of Cosmetic Chemists, annual meeting, Statler Hotel, New York.

Dec. 8—Toilet Goods Assn., Scientific Section, Waldorf-Astoria Hotel, New York.

Dec. 9-11—Chemical Specialties Manufacturers Association, 45th annual meeting, Commodore Hotel, New York, N. Y.

"The fellow who designed the first catsup bottle back about 1870 must have hated the human race. What I cannot understand is why the catsup people ever since have used the same bottle, which will dribble and also gush, but do nothing in between. For us sufferers from catsup disasters a new day is about to dawn.

". . . There are some skeptics of the food business. They claim that pressurized cans are too expensive for use with food. To pack 10 cents worth of peanut butter under pressure costs an extra 13 cents; and they don't think the people will go for it. Maybe not for pancake batter they won't, but I'll gladly pay an extra 13 cents to keep catsup from exploding down my front!"★

First Coffee Product

(*From Page* 23)

ice or standard ice cubes.

Tasti-Cup is banking heavily on the growing consumer use of instant coffee, coupled with the obvious advantages of the aerosol package, to swing users to its product. In 1957, of the total coffee sales of $2.24 billion, nearly 25% (or $470 million) consisted of instant coffee. The figure of $470 million represents a marked increase over the $402 million in 1956 and the $347 million in 1955. It is this sharp rise in consumption of instant-type coffee products that has caused some experts in the field to predict that by 1961 instant coffee will comprise 50% of the total coffee market.

A good functioning pressurized coffee product could logically capture a substantial share of this business.★

Editor's Mailbag

(*From Page* 8)

knowledge, there is very little domestic aerosol activity in Israel; and that the aerosol products sold there are probably imported from Italy, Switzerland, and England. If any readers have any additional information, they are invited to contact Arma Products at 200 West 84th Street, New York 24.

New Aerosol Patents

Listed below is a brief review of recent patents pertinent to the aerosol and related industries.

Complete copies of these patents may be obtained by writing to the publisher of this magazine, Aerosol Publications, Box 31, Caldwell, N. J., and remitting 50c for each copy desired. For orders received outside of the United States the cost will be $1.00 per copy.

2,850,543. MANUFACTURE OF 1,2,2-TRICHLORO-1,1,2-TRIFLUOROETHANE. Issued Sept. 2 to Cyril Woolf, Long Island City, N. Y., assignor to Allied Chemical Corp., a corporation of New York.

The process for fluorinating $CCl_2{=}CCl_2$ to form CCl_2FCClF_2 which process comprises introducing a gas phase mixture comprising $CCl_2{=}CCl_2$, substantially anhydrous HF and free chlorine into a reaction zone containing substantially anhydrous zirconium fluoride catalyst having crystalline size not substantially greater than 400 Angstrom units radius and having been derived by reaction of substantially anhydrous $ZrCl_4$ and substantially anhydrous HF, the amount of HF and free chlorine of the said gas phase mixture being sufficient to ultimately form a chlorofluorocarbon reaction product containing a substantial quantity of CCl_2FCClF_2, heating said mixture in said zone at temperature in the approximate range of 225-400° C. for a time sufficient to cause fluorinating reaction of a substantial amount of said $CCl_2{=}CCl_2$ and effect formation of gaseous saturated chlorofluorocarbon reaction product containing no substantial amount of tetra - fluorinated chlorofluorocarbons and comprising a substantial quality of CCl_2FCClF_2 and below about 10% by weight of CCl_3CF_3 based on the quantity of CCl_2FCClF_2 present, and discharging said gaseous chlorofluorocarbon reaction product from said zone.

2,852,168. DISPENSING VALVE ASSEMBLY. Issued Sept. 16 to Fred F. Suellentrop, Mehlville, Mo.

In a stem actuatable valve assembly mounted in the upstanding flange surrounded central opening of the top closure member for a pressurized container of the self-dispensing type, a grommet molded of resillient rubber material comprising: a lower main body having a flat bottom face and an upwardly and outwardly flared external periphery; a circular flange having a dished upper face extending laterally from the upper end portion of the main body; an upper sleeve segment having a flat top face and a partly cylindrical and partly downwardly and outwardly flared external periphery; a neck segment connecting said main body and said sleeve segment; an annular recess defined externally in the neck segment by the bottom edge of the flared portion of the sleeve segment and the dished upper face of said circular flange; a frusto-conical inner peripheral surface formed centrally in the main body merging at its upper end into a cylindrical inner peripheral surface provided in the neck segment, and at its lower end into the flat bottom face aforesaid of the main body; a lower cylindrical inner peripheral surface merging into a slightly inwardly tapered inner peripheral surface thereabove in the sleeve segment; and an annular internal ledge formed by the juncture of the cylindrical inner peripheral surface aforesaid in the neck segment and the lower cylindrical inner peripheral surface aforesaid in the sleeve segment.

2,853,423. AEROSOL SUN-SCREENING COMPOSITION. Issued Sept. 23 to Anthony L. La Via, Brooklyn, N. Y., assignor to Olin Mathieson Chemical Corp., New York, N. Y., a corporation of Virginia.

An aerosol composition consisting essentially of: a sun-screening agent; a propellant; and a water-repellent, film-forming liquid ester vehicle of high flash point, said ester having an acid moiety selected from the group consisting of higher alkanoic acids, higher alkenoic acids and higher alkanedioic acids, said acids having not more than 18 carbon atoms, and an alcohol moiety selected from the group

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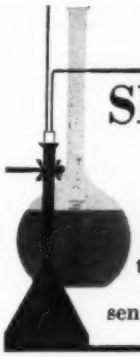

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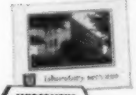

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consisting of saturated, unsubstituted lower aliphatic monohydric alcohols, lower alkylene glycols of lower molecular weight, sorbitol and mannitol.

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Solvay Names Reed, Wholers

The Solvay Process Division of Allied Chemical Corp., New York, recently assigned new personnel to its research department at Syracuse, N. Y., with a view toward developing new product uses and applications. Heading the list is Dr. Robert H. Reed, a nine-year employee of the company, who was named to the newly-created post of director of research.

Dr. Herbert C. Wholers, who before joining Solvay three years ago was technical dircetor of Michigan Chemical Co., was appointed assistant director. He joins two other assistant directors, Drs. Howard A. Bewick and E. W. Smith. Dr. Arlie P. Julien was named chief of application research.

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Colgate Names Migliarese

The appointment of Dr. Joseph Migliarese as head of its new laboratory for biological research located adjacent to Rutgers University at New Brunswick, N. J., was announced last month by the Colgate-Palmolive Co., New York.

The laboratory has as its stated objective "the pursuit and discovery of fundamental biological knowledge which can be applied to both the improvement of existing products and the development of new products important to the company's future growth and expansion."

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Kolmar Shifts Offices

Kolmar Laboratories, Inc., has shifted its executive offices from Milwaukee, Wis. to Port Jervis, N. Y. At the same time the company announced a shift of its research center to Germany, though applied research facilities in the U. S. will continue to operate at Port Jervis under the direction of Michael Spinapolice, vice-president in charge of product development.

According to W. J. Wick, company president, the shift was made because of the concentration of the cosmetic industry in the east.

Trade Mark Applications

Applications for registration of the following trademarks were published in recent issues of the *Official Gazette* of the U. S. Patent Office. In not all cases are there strictly aerosol trademarks, however many of the products listed below come within the category of those for which a possible future use in aerosols is foreseen.

FRENCH TOUCH, for tinted conditioner for gray hair. Filed Jan. 20 by Charles Antell, Inc., Baltimore, Md., claiming first use Dec. 12, 1957.

TAMMY, in heavy script, for perfume and cologne. Filed Jan. 21, by Old 97, Co., d.b.a. Marti Dare, Tampa, Fla., with first use claimed for Jan. 2, 1956.

PERMASPRAY, for anti-corrosive liquid coating. Filed April 4 by Permaspray Manufacturing Corp., League City, Tex., with first use reported as March 20, 1953.

TOP-NOTE, for hair spray, deodorant, and other cosmetics. Filed Nov. 7, 1957 by Sears, Roebuck & Co., Chicago, claiming first use on or about June 17, 1953.

BABY SWEET, for perfume. Filed Dec. 27, 1955 by Joseph W. Simoneau, d.b.a. House of Simoneau and J. W. Simoneau and Sons, Nashua, N. H., claiming first use April 2, 1947.

KENSPRAY, for oils used as concrete form oils and for protecting metallic surfaces against rust and corrosion. Filed Feb. 12 by Kendall Refining Co., Bradford, Pa., with first use claimed for Jan., 1957.

SCREWLOOSE, for penetrating oil utilized in connection with loosening rusted bolts, nuts, machine screw, and frozen parts. Filed Feb. 11 by Petroleum Solvents Corp., New York, with first use reported for Jan. 20 of this year.

BEAUX ART, for hair spray, toilet water, cologne perfume, deodorants, and other cosmetics. Filed Sept. 5, 1957 by Stephan Laboratories, Washington, claiming first use Aug. 26 of same year.

ALUMITE, for combined cleaner and polish for aluminum. Filed Dec. 30, 1957 by Canton Chemical Corp., Wilmington, with first use Feb. 25, 1955.

CHAMPAGNE MINK, for perfume. Filed Nov. 27, 1957 by Vivian Parfums, Inc., New York, claiming first use Sept. 24, 1957.

COLOR BEAUTY, for hair coloring preparation. Filed Dec. 9, 1957 by Charles Antell, Inc., Baltimore, Md., claiming first use Nov. 15, 1957.

CURLTITE, for hair spray preparation for producing tight, springy curls. Filed Jan. 2, 1957 by Nelson Dreyfuss, d.b.a. Dreyfuss Co., Buffalo, N. Y., with first use since October, 1947.

SPRAY KING, for room deodorants. Filed Dec. 16, 1957 by Quality Chemical Products Co., Forest Park, Ill. with first use reported for Dec. 20, 1956.

ARROW, for white wall tire cleaning spray and hand cleaner. Filed Aug. 26, 1957 by Arrow Chemical Co., Wichita, Kans., with first use reported as March 15, 1957.

CHASE MM, for insect repellent spray packed in aerosol bombs. Filed Aug. 23, 1957 by Chase Products Co., Broadview, Ill., claiming first use on or about Feb. 27, 1956.

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Roux Loses Court Suit

Roux Distributing Co., New York, a leading marketer of aerosol hair colorings, recently lost an important court case brought by a woman who suffered a serious allergic reaction to the company's hair dye in bottle form. In a case decided by the Supreme Court of the State of Missouri, Roux was assessed damages to the amount of $85,000, which the Appellate Court later reduced to $65,000.

The woman in the case suffered an outbreak of blotches on her legs and some swelling, together with illness diagnosed as allergic *periarteritis nodosa*, after using the product for two and a half years. The ingredient alleged to have caused the woman's illness was paraphenylenediamine, which was classified as a "known sensitizer" by one of her doctors. The action was based on negligence and failure of the marketer to give adequate warning of possible danger of systemic injury through acquired sensivity to the product.

The Appellate Court, in reducing the judgment, commented that while if the maker is justifiably ignorant of a danger in a product, there is no negligence in failing to guard against it; yet if a danger of an allergy is known or should be known to the maker, and if the consequences of the idiosyncrasy are serious enough, reasonable care may well require the taking of some precaution, such as a warning statement and instruction for making tests. It was conceded that one patch test, which is normally recommended anyway, would not reveal the sensitized condition.

•

Chess Appoints Alexander

Mary Chess, Inc., New York perfume marketer, has named Alexander Alexander, Jr. to be promotion and advertising director of Mary Chess and of Parfums Schiaparelli.

OVER THE TRANSOM

USUALLY reliable informants tell us that Bristol-Myers was caught in a somewhat embarassing tug-of-war on a New York television station last month. First an advertisement came on discussing the relative merits of the "Ipana" squeeze bottle, boasting that purchase of it means "Goodby to pressurized containers that sometimes don't work." Ten minutes later, on the same program came a commercial lauding the merits of "Ipana" aerosol toothpaste!

* * *

If a special service award is ever thought up for someone from the aerosol industry, we think Morrie Root, of G. Barr & Co., and Sam Prussin, of Aerosol Techniques, deserve early consideration. Their yeoman work in delivering technical papers to packaging, toilet goods, cosmetic, essential oil, and other chemical specialty associations and groups all over the country during the past two years has helped the cause of the industry tremendously. With three or four other speakers of their caliber and energy, the aerosol industry could easily be well represented on the program of every major national and local meeting in the country.

The news that Chanel and Lanvin have both introduced their first aerosol packages should be indeed gratifying to the entire industry. These companies are generally acknowledged to be the leading perfume marketers (from the standpoint of prestige, if not volume) and their entry into the aerosol field will undoubtedly cause other non-aerosol holdouts in the perfume industry to bow to the inevitable.

* * *

Though the aerosol industry had relatively few representatives in attendance at the Packaging Institute's Forum in Chicago, the program speakers were so excellent and the interest by the audience so high, we think it was probably one of the most successful single accomplishments by aerosol people in influencing responsible persons in another industry. Pharmacetutical executives and packaging experts from other industries, seemed very much impressed by the achievements of the pressurized package.

Though most of the questions from the floor after the formal papers were easy

Edward J. Breck, president of John H. Breck, Inc., points up the merits of his company's Hair Set Mist to Miss Julie Dane at the conclusion of his recent appearance on the "For Women Only"—show telecast on WHDH-TV, Boston. Miss Dane is mistress of ceremonies for the television series.

enough for the panel of experts to handle, one caused some controversy. The question: "If a liability question develops over an aerosol pharmaceutical that has been contaminated, who is responsible, the marketer or the custom filler?" R. J. Hennessey, packaging research director of Lederle Laboratories, declared that it is always the marketer who is responsible. He advised that it is the marketer's responsibility to keep the contract filler fully informed about the nature of the product, how to prevent contamination or other breakdown, how to store the product and properly insure that it reach the container without damage, etc. He said it also is the policy of his company (and of many other leading pharmaceutical marketers) to have quality control personnel on hand during the time the aerosol product is being filled. If this man is properly qualified, and the product was properly formulated and tested in the beginning, Mr. Hennessy pointed out, there is no reason for any such trouble to develop.

* * *

DuPont's television "Show of the Month" for October 28 ("The Count of Monte Cristo") devoted some of its expensive commercial time to a story of the development of fire alarms powered by "Freon." A brief film story described how a fictional character developed the first device, after his neighbor had been burned to death in his sleep.

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Magnus Receives Citation

Col. Joseph Baird Magnus, commandant of the Veteran Corps of Artillery of New York State, last month received a special citation from the National Military Order of World Wars for distinguished and exceptional service. The presentation, made at the Seventh Regiment Armory in New York, marked the second time it had been awarded to a non-member of the organization. Former President Herbert Hoover was the first to be so honored.

Col. Magnus is vice-president of Magnus, Mabee & Reynard, Inc., New York perfume and essential oil supplier.

Cowles Appoints Plant Supt.

Alfred J. Luhks, Jr. has been a pointed superintendent of the n organic chemical plant of Cowl Chemical Co. at Skaneateles Fal N. Y. He will be in charge of t manufacture of diethyl toluami (insect repellent) and other organ chemicals produced by Cowles